Exhibit 4

Page 1

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NEW JERSEY

- - -

IN RE: JOHNSON & :
JOHNSON TALCUM POWDER :
PRODUCTS MARKETING, :

SALES PRACTICES, AND : NO. 16-2738 PRODUCTS LIABILITY : (FLW) (LHG)

LITIGATION

:

THIS DOCUMENT RELATES : TO ALL CASES :

_ _ _

March 22, 2019

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Videotaped deposition of KARLA BALLMAN, Ph.D., taken pursuant to notice, was held at Skadden Arps, Four Times Square, New York, New York, beginning at 9:04 a.m., on the above date, before Michelle L. Gray, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, and Notary Public.

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1	APPEARANCES:		1	APPEARANCES: (Cont'd.)		
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18 19			19			
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22			22			
23 24			23 24			
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2	SKADDEN ARPS, LLP		2	INDEX		
3	BY: JESSICA D. MILLER, ESQ. 1440 New York Avenue, N.W.		4	Testimony of:		
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12	DRINKER BIDDLE & REATH, LLP BY: KATHERINE McBETH, ESQ.		13			
13	One Logan Square, Suite 2000		14 15	NO. DESCRIPTION PAGE Ballman-1 Expert Report 13		
14	Philadelphia, Pennsylvania 19103 (215) 988-2706		16	Karla Ballman, Ph.D. 2/25/19		
15	katherine.mcbeth@dbr.com Representing the Defendants, Johnson			P1.0200		
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18	BY: MICHAEL ANDERTON, ESQ. 950 Main Avenue, Suite 1100		19	P1.0201		
19	Cleveland, Ohio 44113 (216) 696-4835		20	Ballman-3 Ovarian Cancer 55 And Talc		
20	Michael.anderton@tuckerellis.com Representing the Defendant, PTI		21 22	(Cramer)		
21	Royston LLC and PTI Union LLC			Ballman-4 Draft Screening 87 Assessment Talc		
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2	EXHIBITS (Cont'd.)		2	THE VIDEOGRAPHER: We're now
3 4			3	on the record. My name is Henry
5	NO. DESCRIPTION PAGE		4	Marte. I am a videographer with
6	Ballman-28 The American 483		5	
7	Statistician The ASA's Statement		l .	Golkow Litigation Services.
,	On P-Values: Context		6	Today's date is March 22nd,
8	Process, and Purpose		7	2019, and the time is 9:04 a.m.
9	(Wasserstein) P2.0063.1		8	This videotaped deposition
10	Ballman-29 Comment, Retire 487		9	is being held at Four Times Square
	Statistical Significance		10	in New York, New York, in the
11 12	(Valentin) Ballman-30 Demonstrative 519		11	matter of Talcum Powder
12	Quote from Ballman		12	Litigation.
13	Expert Report		13	The deponent today is
14	P1.0213		14	Dr. Karla Ballman.
1 - 1	Ballman-31 Demonstrative 532		15	Counsel are all introduced
15	Quote from Ballman		16	for the record, for the
16	Expert Report P1.0214		17	stenographic record.
17	Ballman-32 Introduction to 548		18	Will the court reporter
1.0	Meta-Analysis		19	please administer the oath to the
18 19	(Borenstein)		20	witness.
20			21	
21			22	KARLA BALLMAN, Ph.D.,
22			23	having been first duly sworn, was
24			24	examined and testified as follows:
		Page 11		Page 13
1			1	
2	DEPOSITION SUPPORT INDEX		2	EXAMINATION
3 4			3	
5	Direction to Witness Not to Answer		4	BY MR. TISI:
6	PAGE LINE		5	Q. Good morning?
	None.		6	A. Good morning.
7			7	Q. Would you please state your
8	Request for Production of Documents		8	name.
9	PAGE LINE None.		9	A. Karla Ballman.
10	None.		10	Q. And it's Karla Ballman,
11	Stipulations		11	Ph.D.?
12	PAGE LINE		12	A. Well, that's my degree, is a
	None.		13	Ph.D.
13			14	Q. Correct. You know that
14 15	Questions Marked PAGE LINE		15	you've been identified by Johnson &
12	None.		16	Johnson lawyers as an expert in the
16	1,010.		17	talcum powder litigation?
17			18	A. Yes. I've been retained by
18			19	Johnson & Johnson as an expert.
19			20	Q. Okay. At the request of
20 21			21	Johnson & Johnson's lawyers, did you
22			22	prepare an expert report on behalf of
23			23	Johnson & Johnson?
			24	A. I did prepare an expert

4 (Pages 10 to 13)

	Page 14		Page 16
1	report.	1	This question this report
2	Q. Okay. And I'd like to have	2	addresses the question about whether or
3	that marked as Exhibit Number 1.	3	not, in your opinion, to a reasonable
4	(Document marked for	4	degree of certainty, that talcum powder
5	identification as Exhibit	5	products cause or does not cause ovarian
6	Ballman-1.)	6	cancer.
7	BY MR. TISI:	7	A. Yeah. So this report
8	Q. Now Dr. Ballman, does	8	describes the what I went through to
9	this does this report that you issued	9	look at the data in totality with respect
10	address the epidemiologic question about	10	to the question as to whether there is
11	whether talcum powder products are	11	evidence to support the hypothesis that
12	capable of causing ovarian cancer?	12	talcum powder applied to the perineum
13	A. Yes. I had been asked to	13	causes ovarian cancer.
14	look at all the evidence and totality and	14	Q. And in fact, the cover page
15	come to to determine whether or not	15	which you signed says "Expert Report of
16	ovarian cancer I mean talcum powder	16	Karla Ballman Ph.D. for General Causation
17	causes ovarian cancer.	17	Daubert Hearing."
18	Q. Okay. And you reached that	18	Do you see that?
19	to a reasonable degree of medical	19	A. Okay. I see that. So I
20	certainty?	20	didn't know what the legal terms were.
21	A. My my expertise is in	21	So I did do this report, yes.
22	epidemiology and statistics, and so I	22	Q. And this report is your
23	reached it to a reasonable degree of	23	assessment of both the epidemiologic and
24	certainty coming from it, from an	24	non-epidemiologic evidence through a
	Page 15		Page 17
1	epidemiology standpoint. I'm not sure	1	framework that we will be talking about
2	what you mean by medicine. I'm not an	2	today called the Bradford Hill framework,
3	M.D.	3	correct?
4	Q. Okay. What does reasonable	4	A. What do you mean by
5	degree of certainty mean to you?	5	non-epidemiologic?
6	A. It means that I don't see	6	Q. I think I used those were
7	any evidence that supports that	7	the words that you used in the report.
8	hypothesis.	8	A. Did I? Can you point me to
9	Q. Okay. No evidence?	9	the page where I used those words?
10	A. Credible evidence.	10	Q. I'm not going to waste my
11	Q. The report that you issued	11	time to do it. But you I think you
12	is your epidemiologic assessment of that	12	talked about that you were looking at
13	general causation question about whether	13	both the observational studies and the
14	talcum powder products is capable of	14	non-observational evidence?
15	causing ovarian cancer, true?	15	MS. MILLER: Objection.
16	A. What do you mean by general	16	THE WITNESS: So as as an
17	causation? I know that lawyers use	17	expert in epidemiology and
18	different words than what I use. And	18	statistics, and I do this like day
19	they place a lot of emphasis on the words	19	in and day out, as part of my
20	they use, like I do on the numbers. So	20	life, I look at the totality of
21	I'm not quite sure what you mean by	21	the evidence.
22	general causation.	22	So some of the evidence
23	Q. Whether or not let's take	23	involved human. And some of the
24	the word general causation out.	24	evidence may involve some animal

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1	experiments, and some evidence I	1	Q. Okay. And that's your
2	look at might involve some cell	2	opinion?
3	line experiments.	3	A. I just work with I don't
4	BY MR. TÎSI:	4	think that's my opinion. I think it's
5	Q. Okay. And we'll talk about	5	the basis of what all epidemiologists put
6	that. We'll talk about that for sure.	6	together as
7	In collecting that evidence	7	Q. And so it's your opinion
8	did you organize your evidence	8	that all epidemiologists agree that
9	considering what I think the record will	9	cohort studies are better than
10	reflect is the Bradford Hill framework?	10	case-control studies?
11	A. Within my report I do have	11	MS. MILLER: Objection.
12	sections that go through the Bradford	12	THE WITNESS: Again, it
13	Hill framework.	13	depends. Are you saying cohort
14	Q. Okay. And you know what the	14	studies in general
15	Bradford Hill framework is, correct?	15	BY MR. TISI:
16	A. I do.	16	Q. Yes. Prospective
17	Q. And after collecting the	17	A or are you talking
18	evidence, did you then weigh the	18	about
19	evidence?	19	Q. Prospective cohort studies
20	A. So weigh it in what respect?	20	are better than case-control studies on
21	Q. I'm asking you, how did	21	your hierarchy of evidence.
22	you how did you well, we'll come	22	MS. MILLER: Objection.
23	back to this.	23	THE WITNESS: You know,
24	But you looked at the	24	again, it depends. That's a
	Page 19		Page 21
1	evidence and you decided which evidence,	1	pretty general thing. I'm just
2	if any, was credible or not, correct?	2	saying that if you you look in
3	A. I looked at the evidence in	3	epidemiology textbooks, if you
4	totality. And what I and I think I	4	look in any other places where
5	lay out in my report, you know, there	5	this is discussed, cohort studies
6	there is sort of a general hierarchy of	6	as a whole in general are placed
7	epidemiologic evidence that goes from,	7	higher than the evidence coming
8	like, lowest it's like a pyramid. I	8	out of case-control studies.
9	think it's Figure 2 in my report up to	9	BY MR. TISI:
10	the highest evidence. And that's the	10	Q. And we'll talk about that.
11	type of weight I put on it.	11	But that's one of the guiding foundations
12	So, for instance, I place	12	of your expert opinion, correct?
13	sort of evidence coming out of bless	13	MS. MILLER: Objection.
14	you cohort studies higher than	14	THE WITNESS: It's again
15	evidence coming out of case-control	15	established in the epidemiology
16	studies.	16	literature, and I just applied
17	Q. Okay. And your and we'll	17	that to the evidence that I
18	talk about this. But your opinion is	18	assessed.
19	that cohort studies are stronger	19	BY MR. TISI:
20	evidence, more reliable evidence than	20	Q. Okay. Actually my question
21	case case-control studies?	21	is different, Doctor.
22	A. I believe epidemiology,	22	That's one of the guiding
23	that's a fairly well established	23	principles of your expert report that
24	principle.	24	MS. MILLER: Object

6 (Pages 18 to 21)

	Page 22		Page 24
1	BY MR. TISI:	1	A. What I found is in the
2	Q you have weighed	2	case-control studies, about 50 percent of
3	MR. TISI: Wait.	3	the studies had a statistically
4	MS. MILLER: Sorry.	4	significant result with regard to the
5	BY MR. TISI:	5	association between talcum powder use and
6	Q that you have weighed	6	ovarian cancer. And I found within the
7	cohort studies as a whole higher than	7	cohort studies none of them had a
8	case-control studies as a whole.	8	statistically significant association
9	MS. MILLER: Objection.	9	between the use of perineal talcum powder
10	She's asked she's answered this	10	and ovarian cancer.
11	question like four times.	11	Q. And it was your opinion that
12	THE WITNESS: And with all	12	the nonstatistically significant results
13	the interruptions, again, can	13	were inconsistent with the statistically
14	BY MR. TISI:	14	significant results?
15	Q. I'll rephrase the question.	15	A. So if if some one
16	Okay. You asked what other	16	thing is statistically significant and
17	epidemiologists do, and I'm asking you	17	another thing is not statistically
18	what you did.	18	significant, those are two different
19	For the purposes of your	19	things.
20	report, did you the framework in which	20	Q. Okay. They may be two
21	you looked at the different studies, you	21	different things, but is it your opinion
22	placed cohort studies higher than	22	that they are contrary to each other?
23	case-control studies?	23	They are inconsistent?
24	MS. MILLER: Same objection.	24	A. So when when I looked at
	Page 23		Page 25
1	Just make sure you give me	1	the cohort studies, I believe
2	time to object.	2	case-control studies, I want to make
3	THE WITNESS: Thank you.	3	sure I believe that the range of of
4	So again, I looked at the	4	the risk ratios that that were shown
5	evidence in totality and saw what	5	went about were about fourfold and
6	it looked like. I applied	6	were higher than the cohort studies of
7	established epidemiology	7	which their range was maybe about
8	principles that say cohort studies	8	1.75-fold, so much tighter and lower.
9	have higher degree of evidence for	9	Q. Okay. But my question is
10	causality above case-control	10	different. I'm focusing on statistical
11	studies.	11	significance now.
12	BY MR. TISI:	12	Is it your opinion that the
13	Q. And you relied, and we'll	13	nonstatistically significant results were
14	talk about this, the hierarchy, you	14	contrary to the statistically significant
15	referred to that as levels of evidence	15	results in the studies irrespective of
16	throughout your report, correct?	16	study design?
17	A. I believe I do.	17	MS. MILLER: Objection.
18	Q. Okay. And you also found,	18	THE WITNESS: So I'm not
19	and we'll talk about this, that the	19	sure what you mean as contrary.
20	statistically significant results in the	20	And what statisticians, how
21	case-control studies were inconsistent	21	statisticians and epidemiologists
22	and and contrary to the	22	approach problems is you assume
23	nonstatistically significant results of	23	the null hypothesis is true, which
24	the non-case-control studies, correct?	24	would mean no association, and

7 (Pages 22 to 25)

	Page 26		Page 28
1	then you look to see if there's	1	results are inconsistent with the
2	evidence of an association.	2	statistically insignificant results?
3	So the cohort studies found	3	MS. MILLER: Objection.
4	no evidence of an association and	4	We've now asked and answered this
5	about half of the in a	5	I think ten times.
6	statistically significant sense,	6	MR. TISI: Well, she hasn't
7	and about half of the case-control	7	answered it.
8	studies found a statistically	8	BY MR. TISI:
9	significant association.	9	Q. Go ahead.
10	BY MR. TISI:	10	MS. MILLER: I disagree.
11	Q. And so because of your	11	BY MR. TISI:
12	your opinion that statistically	12	Q. Are they are they
13	significant results, insignificant	13	inconsistent in your opinion?
14	results prove the null, and and	14	A. I believe, as I said, the
15	statistically significant results suggest	15	cohort studies find no association.
16	an association, those two conflict with	16	Q. Right.
17	each other and, therefore, we have	17	A. And the case-control
18	inconsistency?	18	studies, some of them find an
19	MS. MILLER: Objection.	19	association, some do not.
20	That mischaracterizes her	20	Q. And so those are
21	testimony.	21	inconsistent?
22	THE WITNESS: So first of	22	MS. MILLER: Objection.
23	all, you can't prove the null.	23	THE WITNESS: Those are
24	BY MR. TISI:	24	clearly different.
	Page 27		Page 29
1	Q. Okay.	1	BY MR. TISI:
2	A. Okay. And so, again, you	2	Q. And so are they
3	assume until it's sort of like law.	3	inconsistent?
4	You assume innocence until proven guilty.	4	MS. MILLER: Objection.
5	Q. Okay.	5	THE WITNESS: Those those
6	A. And so you assume no	6	again are clearly different. And
7	association, and you have to see whether	7	so if if I think it would be
8	or not there is evidence of an	8	a different situation if if,
9	association.	9	you know, every single study found
10	Q. Okay. So changing that a	10	an association which was not the
11	little bit	11	case here.
12	MS. MILLER: Were you done?	12	BY MR. TISI:
13	Were you done answering?	13	Q. Okay. But consistency is
14	THE WITNESS: Well, I'll	14	one of the elements of the Bradford Hill
15	I was going to repeat again is	15	criteria, right?
16	that in the cohort studies they	16	A. That is correct.
17	consistently found no association,	17	Q. Okay. So I'm using a term
18	whereas in the case-control	18	of art, okay.
19	studies, even among themselves,	19	Is it your opinion that
20	some found an association and some	20	that the the statistically significant
21	did not.	21	results are inconsistent with the
22	BY MR. TISI:	22	statistically not significant results?
23	Q. Okay. And so your your	23	A. I think what I said and what
24	view was that statistically significant	24	Bradford Hill said, that there there

8 (Pages 26 to 29)

	Page 30		Page 32
1	are two ways of looking at consistency.	1	She's been dancing around the
2	The first level is whether	2	question.
3	or not they are coming up with	3	THE WITNESS: So the
4	statistical significance or not. So	4	case-control studies generally
5	the the case-control studies were	5	report risk ratios greater than
6	mixed with that. And the cohort studies	6	one. A little over half are
7	all came up with an a nonsignificant	7	statistically significant. And
8	result.	8	the range of the magnitude of the
9	Q. Okay. So those are	9	estimate is quite large. There's
10	inconsistent in your opinion. I	10	no consistency between the
11	just I really want to focus on my	11	MS. SHARKO: You've got to
12	my question.	12	read much slower.
13	Is it your opinion that the	13	MR. TISI: We're going to
14	nonstatistically significant results that	14	have one or two. We're going to
15	you described of the cohort and some of	15	back to what you said what you
16	the case-control studies are inconsistent	16	•
17	with the case-controlled studies that	17	said to me yesterday, that we only
18		18	have one person. MS. MILLER: All she said
19	showed a statistically significant result?	19	was that she should read more
20		20	
21	A. And again, I I don't know	21	slowly. MR. TISI: I understand.
22	how to answer other than to say that	22	
23	there is a difference between something	23	MS. MILLER: I can tell her that.
24	that's statistically significant and	24	MR. LOCKE: If you would
	something that's not.	24	
	Page 31		Page 33
1	If that's your definition of	1	encourage that, that was something
2	inconsistency, then in that regard, they	2	that you did in breach.
3	are inconsistent.	3	BY MR. TISI:
4	Q. Doctor, I you applied the	4	Q. Go ahead.
5	Bradford Hill criteria which is	5	MS. MILLER: If you read too
6	consistency is an element. And I'm	6	quickly, the court reporter can't
7	asking you, using that framework, are	7	take it down.
8	statistically significant results that	8	THE WITNESS: Sorry about
9	you have described inconsistent with the	9	that.
10	statistically significant results?	10	So "Although the
11	A. So give me a minute here. I	11	case-control studies generally
12	want to make I'm thinking perhaps I	12	report risk ratios greater than
13	stated it more clearly in here.	13	one, and a little over half of the
14	So it's my opinion that the	14	studies had statistically
15	consistency of the association criteria	15	significant results, the range of
16	has not been demonstrated.	16	the magnitude is quite large."
17	Q. And is that because there	17	And then I do say, "More
18	are statistically significant results on	18	importantly there is no
19	one hand and statistically insignificant	19	consistency between the
20	results on the other hand?	20	case-control studies and the
21	MS. MILLER: Objection. I	21	cohort studies."
22	think she's now asked and answered	22	BY MR. TISI:
23	this 20 times.	23	Q. And is that in part because
24	MR. TISI: She hasn't.	24	of the statistical significance?

9 (Pages 30 to 33)

	Page 34		Page 36
1	MS. MILLER: Objection.	1	principles in reaching that
2	THE WITNESS: I think I	2	conclusion.
3	just I just stated that there.	3	BY MR. TISI:
4	BY MR. TISI:	4	Q. Okay. And in applying those
5	Q. Okay. Then that's then	5	principles in your judgment, there is no
6	that's the answer. I appreciate that.	6	evidence of causation, true?
7	Okay. Could you turn to	7	MS. MILLER: Objection.
8	Page 53 of your first of all, after	8	That mischaracterizes the
9	weighing the evidence, did you reach a	9	testimony again.
10	conclusion about the causation question?	10	MR. TISI: I'm asking the
11	MS. MILLER: Objection.	11	question. I'm asking
12	Vague.	12	MS. MILLER: Yeah, but
13	THE WITNESS: Yeah. What	13	you're mischaracterized her
14	MR. TISI: Okay. Let me ask	14	testimony.
15	the question.	15	MR. TISI: I'm asking her a
16	BY MR. TISI:	16	question, Counsel. You are
17	Q. After weighing all the	17	MS. MILLER:
18	evidence that you collected, did you	18	Mischaracterizing her testimony.
19	reach a conclusion about whether, in your	19	MR. TISI: Fine, object.
20	opinion, to a reasonable degree of	20	MS. MILLER: I am.
21	certainty, that talcum powder does or	21	MR. TISI: Good.
22	does not cause ovarian cancer?	22	THE WITNESS: May you repeat
23	A. So it is my professional	23	that, please.
24	opinion that there is no evidence of a	24	BY MR. TISI:
	Page 35		Page 37
1	causal relationship between talcum powder	1	Q. Yes, in your judgment based
2	exposure and ovarian cancer.	2	upon your analysis of the evidence, the
3	Q. And you used your	3	epidemiologic and non-epidemiologic
4	professional judgment based upon your	4	evidence, you have concluded that there
5	experience and training to reach that	5	is no risk of ovarian cancer with talcum
6	conclusion?	6	powder products?
7	A. It's based on my extensive	7	MS. MILLER: Objection.
8	and rigorous review of the epidemiology	8	Same objection.
9	studies, and to some extent my review of	9	THE WITNESS: I'm sorry. I
10	the scientific literature and my	10	keep not
11	experience and expertise in assessing	11	I believe I said that I
12	studies for level of evidence of the	12	applied established
13	data.	13	epidemiological principles in
14	Q. Okay. And did you use your	14	evaluating the data in totality
15	professional judgment in reaching that	15	and came to the conclusion that
16	conclusion?	16	the evidence does not support a
17	A. I don't know what you mean	17	causal relationship between talcum
18	by professional judgment.	18	powder exposure and ovarian
19	Q. Did you did you use your	19	cancer.
20	judgment in looking at the data?	20	BY MR. TISI:
21	A. I	21	Q. Now, if you look on Page 53,
22	MS. MILLER: Objection.	22	of your report you have a conclusion.
23	THE WITNESS: I'm sorry.	23	A. Yes.
24	I applied epidemiological	24	Q. And on the conclusion, you

10 (Pages 34 to 37)

	Page 38		Page 40
1	state the following. You state, "In my	1	A. I am not a gynecologist.
2	professional opinion, there is no	2	Q. You are not an oncologist?
3	evidence of a causal relationship between	3	A. I am not an oncologist.
		4	
4	perineal genital talcum powder exposure		Q. You are not now nor have you
5	and ovarian cancer. This is based on my	5	ever been licensed to practice medicine
6	extensive and rigorous review of the	6	in any jurisdiction?
7	epidemiology studies, and to a lesser	7	A. That is correct.
8	extent my review of the scientific	8	Q. You're not a toxicologist?
9	literature, and my experience and	9	A. That is correct.
10	expertise in assessing studies for the	10	Q. You're not a mineralogist?
11	level of evidence in the data."	11	A. That is correct.
12	Did I read that correctly?	12	Q. You're not a geologist?
13	A. You did read that correctly.	13	A. That is correct.
14	Q. And that is your opinion?	14	Q. In fact, you do not have a
15	A. It's what I wrote there.	15	formal degree from any university in
16	Q. Okay. I'm going to mark,	16	epidemiology, do you?
17	just so we don't have to read the whole	17	A. My degree is in operations
18	report and come back to that.	18	research. And it might be of interest
19	(Document marked for	19	that Bradford Hill's degree actually was
20	identification as Exhibit	20	in economics. And I feel we followed
21	Ballman-2.)	21	sort of the same career path in that our
22	MR. TISI: This is your	22	jobs that we took subsequently, first of
23	opinion. I'm going to mark this	23	all, we had the basis, the quantitative
24	as Exhibit Number 2, which is the	24	basis. I had some statistics courses as
	Page 39		Page 41
1	statement that I just read.	1	part of my degree. I also took some I
1 2	BY MR. TISI:	2	don't know if it was for credit or not
3		3	
	Q. And you can keep that and	4	a seminar that was looking at sort of
4	put that aside for a moment. We're going		confounding and biases in published
5	to come back to that.	5	literature. And so that sort of sparked
6	Are the bases for this	6	my interest in statistics. And since
7	Ballman causation conclusion all	7	statistics was one of the tools in the
8	described in your epidemiology report	8	toolbox of operations research, my career
9	which we've marked as Exhibit Number 1?	9	started going the direction of
10	A. I'm sorry. Could you repeat	10	statistics.
11	the question?	11	MR. TISI: Okay. I'm going
12	Q. Yes. Are the bases for your	12	to move to strike.
13	conclusion that is in Exhibit Number 2	13	BY MR. TISI:
14	all described in your report which is	14	Q. My question was: Do you
15	Exhibit Number 1?	15	have a formal degree from any university
16	A. I believe that is the case.	16	in epidemiology?
17	I go through and support and describe the	17	A. Again, I have no formal
18	methods that I used and the reasons why I	18	degree, but I have extensive experience
19	came to various conclusions.	19	in epidemiology and statistics through my
20	Q. Okay. We discuss this in	20	20 years of work. I mean, that's what I
21	more detail, but let me just back up for	21	do day in and day out.
22	a minute.	22	Q. So the record is clear, you
23	You're not a gynecologist,	23	do not have a Ph.D. in epidemiology,
24	true?	24	correct?

	Page 42		Page 44
1	MS. MILLER: Objection.	1	you do introduce yourself as a
1 2 3 4	THE WITNESS: My Ph.D. is in	2	statistician, correct?
3	operations research. But what I'm	3	MS. MILLER: Objection.
4	saying is I have	4	THE WITNESS: So it depends
5	BY MR. TISI:	5	what colleagues I'm introducing
6	Q. I understand what you're	6	myself to. I mean, sometimes I
7	saying. I need to	7	introduce myself as a clinical
8	MS. MILLER: Please don't	8	researcher.
9	interrupt the witness.	9	BY MR. TISI:
10	MR. TISI: No, we're going	10	Q. Okay. Do when you speak
11	to we're going to	11	to the FDA, do you introduce yourself as
12	MS. MILLER: No. No, you're	12	a statistician?
13	not going to interrupt her.	13	A. When I speak to the FDA, I
14	MR. TISI: We will call	14	do introduce myself as a statistician,
15	no. We're going to call the	15	because usually, you know, it just again
16	judge. I asked her a very	16	depends upon what skills the individuals,
17	simple	17	you know, are are in need at that
18	MS. MILLER: That's fine.	18	time.
19	MR. TISI: question.	19	But I have to say that there
20	MR. MILLER: That's fine if	20	is incredible overlap between
21	you're going to call the judge	21	biostatistics and epidemiology. If you
22	BY MR. TISI:	22	look at any first textbook you will see
23	Q. Are you	23	basically the same topics in whether
24	MR. MILLER: and I'll	24	the book says epidemiology on it or
	Page 43		Page 45
1	tell the judge that you are interrupting	1	whether the book says statistics on it.
2	the witness.	2	And, in fact, many departments and
3	BY MR. TISI:	3	divisions across the country, like my
4	Q. Are you are you do you	4	own, are departments and divisions of
5	hold a Ph.D. in in epidemiology?	5	biostatistics and epidemiology, just due
6	MS. MILLER: Objection.	6	to the amount of overlap when it comes to
7	Asked and answered twice.	7	medical research.
8	THE WITNESS: I do not have	8	Q. Doctor, I'm going to I'm
9	a Ph.D. in epidemiology, but I was	9	really going to stop and we're going to
10	explaining that I do have	10	call the judge.
11	extensive experience in statistics	11	I am asking you a very
12	and epidemiology. That's all I've	12	simple, straightforward question.
13	been doing, living and breathing	13	When you introduce yourself
14	for the last 20 years.	14	to the FDA, do you list yourself as a
15	BY MR. TISI:	15	statistician, yes or no?
16	Q. Do you have a masters degree	16	MS. MILLER: Objection.
17	in epidemiology?	17	Objection. If she doesn't feel
18	A. My masters degree is in	18	like yes or no is a proper answer,
19	operations research which contains,	19	she needs to give you the full
20	again, some statistical training and some	20	context.
21	training in epidemiology. But the formal	21	MR. TISI: Well, she I
22	degree is operations research.	22	will ask her if she needs to
23	Q. In fact, when you introduce	23	give me full context, she can tell
24	yourself to your professional colleagues,	24	me that and I will then ask a

12 (Pages 42 to 45)

	Page 46		Page 48
1	follow-up.	1	researched the causation question that
2	MS. MILLER: Please don't	2	you are here to testify about today?
3	BY MR. TISI:	3	A. I had read some literature.
4	Q. Are you when you	4	Q. Okay.
5	introduce yourself to the FDA	5	A. Did not perform formal
6	MS. MILLER: Please don't	6	research.
7	argue with me.	7	Q. Okay. Had you ever reached
8	BY MR. TISI:	8	a conclusion about whether or not talcum
9	Q do you introduce yourself	9	powder products cause ovarian cancer
10	as a statistician?	10	before being retained by Ms. Sharko?
11	A. When we go around the room	11	A. No.
12	and say I I say I when I	12	Q. Prior to being retained by
13	introduce myself around the room, when we	13	Johnson & Johnson lawyers to defend them
14	have to introduce ourselves at FDA	14	in lawsuits, have you ever expressed an
15	meetings, I say, usually, "I'm Karla	15	opinion one way or the other as to
16	Ballman, the division chief of	16	whether or not talcum powder products are
17	biostatistics and epidemiology. I am a	17	capable of causing ovarian cancer?
18	statistician."	18	MS. MILLER: Objection. She
19	Q. Okay. When you apply for	19	wasn't retained to defend us.
20	grants for research, do you describe	20	MR. TISI: Okay. Then let
21	yourself as a statistician?	21	me rephrase the question.
22	A. I don't know if I state	22	MS. MILLER: But we're the
23	anywhere in a grant for research as to if	23	lawyers. Not not she.
24	I'm a statistician or not. It's usually	24	BY MR. TISI:
	Page 47		Page 49
1	investigator or co-investigator.	1	Q. Where before being
2	Q. Okay. Let's move to another	2	contacted by the lawyers to be a
3	topic.	3	potential expert in litigation involving
4	You know I represent women	4	women who claim that they may die as a
5	who claim their use of Johnson &	5	result of ovarian cancer caused by talcum
6	Johnson's talcum powder products caused	6	powder products, did you ever express an
7	ovarian cancer, true?	7	opinion about whether or not talcum
8	A. I I don't know what you	8	powder products cause ovarian cancer?
9	do.	9	MS. MILLER: Objection.
10	Q. Okay. When we were first	10	Your restated question was as
11	when were you first contacted by J&J's	11	objectionable as your first
12	lawyers to consult on the question that	12	question.
13	you have given your report on regarding	13	THE WITNESS: And I'm sorry.
14	the link between ovarian cancer and	14	That was a very long question. So
15	talcum powder products, or the lack of a	15	I don't know when I answer it
16	link?	16	what what I'm agreeing to and
17	MS. MILLER: Objection.	17	what I'm not agreeing to, so could
18	THE WITNESS: I was	18	you
19	contacted by Johnson & Johnson	19	BY MR. TISI:
20	lawyers, I was contacted by	20	Q. Prior to then let me
21	Ms. Sharko in November of 2018.	21	rephrase the question.
22	BY MR. TISI:	22	Prior to November of 2018
23	Q. Okay. Prior to being	23	have you ever expressed an opinion as to
24	retained by lawyers at J&J, have you ever	24	whether or not talcum powder products

13 (Pages 46 to 49)

	Page 50		Page 52
1	cause ovarian cancer?	1	BY MR. TISI:
2	A. Not in any sort of formal	2	Q. And that would have been
3	sense. I don't know if in casual	3	after you met with the lawyers for
4	conversation someone may have said what	4	Johnson & Johnson, correct?
5	do you think. But no, I didn't read a	5	A. I was
6	form a formal opinion.	6	MS. MILLER: Objection.
7	Q. Okay. Is it fair to say	7	Please remember to give me
8	that the opinions that you have on the	8	time to object.
9	subject about whether or not talcum	9	THE WITNESS: I did not
10	powder products cause ovarian cancer	10	start the research until after
11	occurred after you've spoke to the	11	November 2018.
12	lawyers for the first time in November of	12	BY MR. TISI:
13	2018?	13	Q. When you first met the
14	MS. MILLER: Objection.	14	Johnson & Johnson lawyers?
15	THE WITNESS: So my opinion	15	MS. MILLER: Objection.
16	as to whether or not there is	16	THE WITNESS: Again, I had
17	evidence that talcum powder causes	17	no reason to do any research
18	ovarian cancer, is based upon the	18	before that, and so I started the
19	research that I had done.	19	research after I was retained to
20	I I did not reach a	20	do to render an opinion.
21	formal opinion until I had done	21	BY MR. TISI:
22	the research and looked at the	22	Q. Now, is it fair to say that
23	data in totality.	23	you never published on the subject of
24	BY MR. TISI:	24	talcum powder and ovarian cancer?
	Page 51		Page 53
1	Q. And that was after November	1	A. That is correct. There are
2	of 2018?	2	no publications with my name on it.
3	A. Well, I I that's when	3	Q. And though you have by my
4	I started the research	4	count over 200 publications in the
5	Q. Right.	5	literature, you didn't cite any of your
6	A on on the issue.	6	own literature for or any of your
7	Q. So the answer to my question	7	published work in your report, correct?
8	is, the first time you ever reached a	8	A. I again just used the
9	conclusion based upon your evaluation of	9	research tools that I use when I do any
10	the data did not occur until after you	10	sort of research. And, you know, there
11	first met with Ms. Sharko in 2018	11	are many publications, as you see, that I
12	MS. MILLER: Object.	12	have there where I cite none of my own
13	BY MR. TISI:	13	work. I just use what's relevant to
14	Q November?	14	doing the research for the question at
15	MS. MILLER: Objection.	15	hand.
16	THE WITNESS: So so how I	16	Q. And your work was not
17	would say it is I did not start	17	relevant to your report, correct?
18	doing research on the issue until	18	MS. MILLER: Objection.
19	after November of 2018. And as a	19	BY MR. TISI:
20	result of that research, I reached	20	Q. Or you would have cited it?
21	a conclusion which obviously,	21	MS. MILLER: Objection.
22	since I didn't start the research	22	THE WITNESS: So my
23	until November, I didn't reach the	23	experience is extremely relevant
24	conclusion until after November.	24	to my opinion, and my work is my

14 (Pages 50 to 53)

	Page 54		Page 56
1	experience. And so	1	A. Yes. I do reference this
2	BY MR. TISI:	2	article.
3	Q. Okay. But your published	3	Q. Okay. Since 1982, you would
4	research, you did not rely on any of your	4	agree with me that there are over 30
5	published research in crafting your	5	epidemiologic studies that have been
6	report because it's not it's not in	6	published?
7	the bibliography or the anything	7	A. Since this time, I believe
8	relied on that was given to us, so I'll	8	the studies that I have in my report and
9	represent to you that I looked through	9	I reviewed included a total of about 30
10	all all of your citations, and there's	10	that were case-control studies or cohort
11	not a single reference to any of your	11	studies, and meta-analyses.
12	published work. Is that accurate?	12	Q. Right. So between 1982 and
13	MS. MILLER: Objection.	13	the time that we sit here today in 2019,
14	THE WITNESS: So there are	14	there are over 30 studies, and these
15	no references	15	include population-based case-control
16	BY MR. TISI:	16	studies, correct?
17	Q. Okay.	17	A. There are population-based
18	A to my own published work.	18	case-control studies.
19	But that wasn't necessary in my	19	Q. They include hospital-based
20	that because it was based upon my	20	case-control studies, right?
21	experience and I used what were the	21	A. There are hospital-based
22	relevant pieces of the epidemiology and	22	case-control studies.
23	actually, you know, the reports that I	23	Q. Cohort studies, which you
24	read, and that is in my report.	24	mentioned.
	Page 55		Page 57
1	Q. Okay. And you know that the	1	A. There are cohort studies.
2	first epidemiologic study that described	2	Q. Meta-analyses of the
3	the potential association between talcum	3	epidemiologic studies?
4	powder products and ovarian cancer was	4	A. There are meta-analyses of
5	published by researchers out of Harvard	5	the observational studies.
6	University in 1982, correct?	6	Q. A pooled analysis?
7	MS. MILLER: Objection.	7	A. There is a pooled analysis.
8	THE WITNESS: So it I	8	Q. And there are biologic
9	don't know with complete	9	studies, which you also refer to?
10	confidence, but I do know that the	10	A. There are there are some
11	first publication that I reviewed	11	biological studies.
12	that had an association in it, I	12	Q. Okay. And of all those
13	believe was in 1982 by Cramer.	13	studies in the past 40 years, you have
14	BY MR. TISI:	14	not been involved in any of them, your
15	Q. Okay. I'm just going to,	15	name doesn't appear in any of those
16	for purposes of the record, I will attach	16	studies, correct?
17	the Cramer article as Exhibit Number 3.	17	A. I am not an author on any of
18	(Document marked for	18	those studies that you cited.
19	identification as Exhibit	19	Q. Well, you were not involved
20	Ballman-3.)	20	in any way in any of those studies,
21	BY MR. TISI:	21	correct, because your involvement in
22	Q. Is that the same Exhibit	22	this this issue didn't really happen
23	Number 3 the Cramer article that you	23	until after November of 2018, correct?
24	referenced?	24	A. So involvement, I'm not sure

15 (Pages 54 to 57)

	Page 58		Page 60
1	how to quite interpret that. I mean, I	1	for over 40 years. You've seen you've
2	have vast amount of experience of	2	seen articles across the spectrum,
3	analyzing data that are in these types of	3	correct?
4	studies	4	MR. LOCKE: Objection.
5	MS. MILLER: Please don't	5	MS. MILLER: Objection.
6	interrupt her.	6	That's like seven different
7	THE WITNESS: in terms of	7	questions all in one.
8	coming to a conclusion.	8	MR. TISI: Yes.
9	BY MR. TISI:	9	BY MR. TISI:
10	Q. Doctor, I'm not asking you	10	Q. There are multiple
11	what your background is now. I'm asking	11	scientists let me rephrase the
12	you prior to November of 2018, had you	12	question.
13	ever been involved in any study,	13	There are multiple
14	observational or otherwise, in any	14	scientists from multiple disciplines that
15	capacity involving talcum and ovarian	15	have looked at the questions related to
16	cancer?	16	ovarian cancer and talc for over
17	A. I have no publications in	17	40 years, true?
18	talc and ovarian cancer.	18	MS. MILLER: Objection.
19	Q. I'm not limiting it to	19	THE WITNESS: So I don't
20	publications. I'm asking you, had you	20	know what you mean by "multiple."
21	had any involvement in any fashion with	21	But when there's any sort of topic
22	any study involving ovarian cancer and	22	that's researched, it involves,
23	tale?	23	you know, many different people.
24	A. So again, I'm not sure what	24	It's never I mean, it's not
	Page 59		Page 61
1	you mean by the term "involvement." I	1	valuable research if it's just one
2	mean	2	person. So I don't think talcum
3	Q. Did anyone then I'll	3	powder and ovarian cancer is any
4	rephrase it. Okay.	4	different from any other research
5	Did anyone ever call you and	5	field that you had mentioned.
6	say, "You know, we're doing a study,	6	BY MR. TISI:
7	Dr. Ballman. Can you give us your	7	Q. Right. And so the answer to
8	informal advice on how to design it,"	8	the question is there are literally
9	involving ovarian cancer	9	dozens of scientists across the spectrum
10	MS. MILLER: Objection.	10	that have been looking at these issues
11	BY MR. TISI:	11	and publishing in this area for 40 years,
12	Q and talcum powder	12	true?
13	products?	13	MS. MILLER: Objection.
14	MS. MILLER: Objection.	14	THE WITNESS: I can't answer
15	THE WITNESS: I have not	15	that with certainty. I don't know
16	received such a phone call.	16	how many scientists. I don't know
17	BY MR. TISI:	17	how long it's been
18	Q. Okay. And would you agree	18	BY MR. TISI:
19	with me that there are literally dozens	19	Q. There are many. How about
20	of scientists that have been involved in	20	many?
21	this issue over 40 years, involved in the	21	A. Just like any other research
22	epidemiology studies, toxicologists,	22	topic, it's it's what one would
23	pharmacologists, mineralogist, have been	23	expect, yes.
24	involved in the ovarian cancer talc issue	24	Q. Okay. Have any of them been

16 (Pages 58 to 61)

	Page 62		Page 64
1	you?	1	MS. MILLER: Objection.
2	MS. MILLER: Objection.	2	Asked and answered.
3	We've been through this.	3	THE WITNESS: Yeah, again, I
4	THE WITNESS: You know, I	4	just don't know why why a
5	I have not done myself a study in	5	company I I don't know how
6	ovarian cancer, a published study	6	companies operate. I don't know
7	in ovarian cancer and talc. I	7	if they engage experts to do
8	have done research on this topic	8	research for them necessarily.
9	as we talked about after	9	
_			I mean, some companies may
10	November 2018	10	and some companies may not, I just
11	BY MR. TISI:	11	don't know.
12	Q. Okay.	12	BY MR. TISI:
13	A using all the expertise I	13	Q. Johnson & Johnson never
14	have in similar types of studies that	14	contacted you in 40 years to ever perform
15	I've been involved in, but just didn't	15	a study or advise them in any fashion
16	have the topic ovarian cancer and talcum	16	about either how to design a study to
17	powder.	17	look at the question of ovarian cancer,
18	Q. Now, I can represent to you	18	did they?
19	that Johnson & Johnson has produced, as	19	A. I
20	they tell me all the time, millions of	20	MS. MILLER: Objection.
21	pages of documents in connection with	21	Please give me ten seconds.
22	this litigation. And I'll represent that	22	THE WITNESS: I know it.
23	to you. And that covers the time span	23	I'm so sorry.
24	since the 1960s and perhaps even before.	24	MS. MILLER: That's all it
	Page 63		Page 65
1	Would it surprise you that	1	takes.
2	your name, Karla Ballman, isn't mentioned	2	THE WITNESS: Again, I'm
3	as having been contacted even once by	3	just at a loss. I don't know why
4	Johnson & Johnson on the issue of ovarian	4	they would.
5	cancer and talcum powder products in that	5	BY MR. TISI:
6	whole time?	6	Q. Okay. Well
7	MS. MILLER: Objection.	7	A. Because again, I don't know
8	THE WITNESS: I wouldn't	8	if they do research. I don't know if
9	I'm don't even know how to	9	they contact people to do research from
10	answer that.	10	them for them, so I I just don't
11	I I wouldn't know why a	11	Q. Well, I'll represent to you
12	company would contact me or have	12	that they have. Okay.
13	my name in any sort of documents	13	Among other people they've
14	that that they generated if I	14	contacted, do you know who Ken Rothman
15	hadn't been working with the	15	is?
16	company. I just don't know how to	16	A. No.
17	answer that.	17	Q. You don't know you
18	BY MR. TISI:	18	testified in your Viagra litigation that
19	Q. Would it surprise you that	19	you knew who Ken Rothman was. He's an
20	there's no nobody ever mentioned we	20	•
21	need to contact Karla Ballman and obtain	21	epidemiologist who published a textbook
		22	on epidemiology.
22	her expertise about whether or not talcum		A. Oh, yeah.
23	powder product caused ovarian cancer in	23	Q. Do you remember that?
24	that 40-year period?	24	A. Yeah, yeah, yeah,

17 (Pages 62 to 65)

	Page 66		Page 68
1	yeah. I don't know him personally.	1	it's unusual. I'm just asking you the
2	Q. Right. But he is a he is	2	simple question. They never none of
3	a well-established epidemiologist,	3	the lawyers excuse me.
4	correct?	4	None of the scientists at
5	MS. MILLER: Objection.	5	Johnson & Johnson ever contacted you over
6	THE WITNESS: He is an	6	the past 40 years to seek your advice,
7	epidemiologist and I've heard his	7	true?
8	name.	8	A. I have not been
9	BY MR. TISI:	9	MS. MILLER: Objection.
10	Q. Right. And you also	10	THE WITNESS: Oh, sorry.
11	and contacted Drs. Huncharek and	11	BY MR. TISI:
12	Muscat. You've seen those names,	12	Q. You may answer.
13	correct?	13	A. Yeah.
14	A. I have seen those names.	14	Q. She is going to object to
15	Q. Okay. And I'm going to tell	15	everything, so just
16	you, over the course of 40 years, they	16	A. I'll wait, I need to wait.
17	have contacted people from various	17	MS. MILLER: I'm not going
18	disciplines to for various questions	18	to object if you don't ask
19	related to talc and ovarian cancer. I	19	objectionable questions.
20	want to ask you to assume that that is	20	MR. TISI: Okay.
21	true. And I will	21	MS. MILLER: It's a simple
22	MS. MILLER: Objection.	22	solution.
23	MR. TISI: I haven't even	23	THE WITNESS: I have not
24	asked the question, counsel.	24	been contacted by anyone in
	Page 67		Page 69
1	MS. MILLER: I didn't even	1	Johnson & Johnson.
2	know. I can't tell what's a	2	BY MR. TISI:
3	question and what's a lecture.	3	Q. Related to the issue of
4	MR. TISI: Well, then	4	talcum powder products and ovarian
5	wait wait till the end.	5	cancer, true?
6	BY MR. TISI:	6	A. If you don't count the
7	Q. At no time did any scientist	7	lawyers, and I'm not sure what that
8	or regulatory person from Johnson &	8	relationship means, I I have not.
9	Johnson ever contact Dr. Ballman to ask	9	Q. Okay. Would it surprise you
10	her opinions until the lawyers contacted	10	that when we looked in the Johnson in
11	you in November of 2018, would that be a	11	the millions of pages of documents that
12	true statement?	12	Johnson & Johnson sent to us, that not a
13	MS. MILLER: Objection.	13	single article of research that you have
14	THE WITNESS: Again, as I	14	ever done has appeared in in any
15	said, I I just don't know how	15	bibliography for any issue related to
16	companies operate. You tell me	16	ovarian cancer, would that surprise you?
17	they've had they hire experts	17	MS. MILLER: Objection.
18	and I have no evidence one way or	18	THE WITNESS: You know,
19	another if they do.	19	again, I don't know what documents
20	But I had not been contacted	20	or what's in those million pages.
21	by Johnson & Johnson, but I don't	21	So I don't know if that would
22	know if that's unusual. I just	22	surprise me or not.
23	BY MR. TISI:	23	BY MR. TISI:
24	Q. I'm not asking you whether	24	Q. Well, can you think of any

18 (Pages 66 to 69)

	Page 70		Page 72
1	article that you've ever written that	1	Q. Okay. And that would be for
2	would be relevant to the question of	2	research, correct?
3	whether or not ovarian cancer is caused	3	A. I haven't been contacted by
4	by talcum powder products?	4	anyone in Johnson & Johnson.
5	MS. MILLER: Objection.	5	Q. And that would be to help
6	THE WITNESS: Well, I have	6	them in any regulatory issue, correct?
7	expertise in other in in	7	A. I have not been contacted by
8	just sort of this type of thing in	8	anyone in Johnson & Johnson.
9	general. But if if it's	9	Q. Okay. So it's the
10	related to ovarian cancer and	10	company and I'm distinction the
11	talcum powder as we discussed,	11	company from the lawyers.
12	there would not be any	12	The company has not spent
13	publications with my name on it	13	any time and effort trying to understand
14	that that address ovarian	14	your opinions or the basis of it, just
15	cancer and talcum powder.	15	the lawyers, true?
16	BY MR. TISI:	16	MS. MILLER: Objection.
17	Q. Now, even as of today, we're	17	THE WITNESS: Again, I'm not
18	now in March of 2019, since Ms. Sharko	18	sure how to answer that because I
19	found you as an expert witness in this	19	was retained in terms of the
20	litigation, have you ever been in contact	20	litigation. I don't know if
21	with any J&J scientist that where they	21	there's any rules that surround
22	said well, now that we found you,	22	that or whatever. I have no idea.
23	Dr. Ballman, maybe you can help us design	23	BY MR. TISI:
24	a study or give us your advice on	24	Q. But the answer would be no,
	Page 71		Page 73
1	causation or any anything related to	1	you've not been retained and spoken to
2	talcum powder products and ovarian	2	anybody at Johnson & Johnson in
3	cancer, have you spoken to any scientist	3	connection with any scientific question
4	at J&J since November of 2018?	4	outside of the legal arena, correct?
5	A. I have not spoke	5	A. As I mentioned, I have not,
6	MS. MILLER: You've got to	6	as far as I know, talked to anyone from
7	let me object. There was like,	7	Johnson & Johnson.
8	seven questions in there. You've	8	Q. In fact, Johnson & Johnson
9	got to give me time to object.	9	makes hundreds of products for
10	That was objectionable.	10	pharmaceuticals, medical devices and
11	THE WITNESS: Can you	11	cosmetics. You know that to be true,
12	rephrase? Not rephrase. Just	12	correct?
13	repeat.	13	MS. MILLER: Objection.
14	BY MR. TISI:	14	THE WITNESS: I know they
15	Q. Since you've been found as	15	make lots of products. I don't
16	an expert witness in November of 2018,	16	know how many. I don't know what
17	has any scientist at Johnson & Johnson	17	the span is of the different
18	reached out to you to ask your opinion on	18	areas.
19	talcum powder products and ovarian	19	BY MR. TISI:
20	cancer?	20	Q. Has any Johnson & Johnson
21	A. Since I have been retained	21	scientist ever reached out to you to help
22	by the lawyer by Johnson & Johnson in	22	them understand any scientific question
23	2018 for this case, I have not been	23	for any reason?
24	contacted by anyone in Johnson & Johnson.	24	MS. MILLER: Objection.
	COMACICU DY ANYONE III JOHNSON & JOHNSON.	4 ⁴	IVIS. IVIILLER. UDJECTIOII.

19 (Pages 70 to 73)

THE WITNESS: Again, I don't know how companies operate. I don't know I mean I presume they have their own scientists. I'm not sure if they are reaching A. I believe myse the institution I work for? Q. Your team. You anybody that you may coll A. There might have	elf, or just
2 know how companies operate. I 2 the institution I work for? 3 don't know I mean I presume 3 Q. Your team. You 4 they have their own scientists. 4 anybody that you may coll 5 I'm not sure if they are reaching 5 A. There might have	, 3
don't know I mean I presume they have their own scientists. I'm not sure if they are reaching don't know I mean I presume they have their own scientists. I'm not sure if they are reaching don't know I mean I presume they are scientists. A. There might have	
4 they have their own scientists. 5 I'm not sure if they are reaching 4 anybody that you may coll 5 A. There might have	and your
5 I'm not sure if they are reaching 5 A. There might have	
6 out. I just 6 two occasions.	
7 BY MR. TISI: 7 Q. Okay. But they's	ve not been
8 Q. I'm asking you what they did 8 Johnson & Johnson?	
9 for you. And I am not asking you to get 9 A. That is correct.	
10 in their mind and figure out what their 10 Q. Johnson & Johns	son never
policies are or anything like that.	
Has Johnson & Johnson, any 12 before the FDA related to	
13 Johnson & Johnson scientist ever reached 13 products, have they?	F
out to Dr. Karla Ballman to ask her help 14 MS. MILLER: O	biection.
15 in understanding any scientific question 15 THE WITNESS:	
16 for any reason? 16 been before the FDA	
17 A. Again, I have not talked to 17 Johnson & Johnson.	
18 anyone in an official capacity from 18 BY MR. TISI:	
19 Johnson & Johnson. 19 Q. For any reason in	ncluding
20 Q. And you have a career 20 A. For any reason.	
21 spanning how many decades now? 21 Q. Okay. You know	w that IARC
22 A. Oh, easily about two to 22 looked at the question of co	
23 three decades. 23 and talcum powder produc	
Q. Okay. And in that two or 24 correct?	
Page 75	Page 77
1 three decades, no one from Johnson & 1 A. I read a report from Johnson & 1	om IRAC
2 Johnson ever reached out to you and asked 2 (sic) who that looked at	
3 you, "Hey, you know, we got this problem 3 question.	
4 here. Can you help us design a study or 4 Q. And were you as	sked by
5 analyze data, perform a causation 5 anybody in the talc industr	
6 analysis," anything scientist related? 6 understand that talc-ovaria	
7 MS. MILLER: Objection. 7 connection in connection	
8 THE WITNESS: So I am in 8 proceedings in 2006?	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
9 academia. So, you know, I don't 9 A. I was not part of	the IRAC
know why they would necessarily 10 (sic) committee that looke	
reach out to me in particular. No 11 question.	
other companies do either. 12 Q. You say IRAC.	Is it IRAC
13 BY MR. TISI: 13 or	
14 Q. You've never done studies 14 A. I'm sorry. IARC	L. I know.
15 for any company? 15 I did that I do that often	
16 A. I didn't say that.	
17 Q. Okay. You've done studies 17 A. It's IARC.	
18 for companies, true? You've done studies 18 Q. Okay. And what	t does IARC
that have been sponsored by companies, 19 stand for?	
20 correct? 20 A. International Age	ency I
21 A. So now you'll have to 21 don't remember the title.	
22 define 22 Q. Did J&J scientist	
23 Q. Have you received funding 23 MS. MILLER: W	
24 from companies to do studies? 24 looking for the answe	

20 (Pages 74 to 77)

	Page 78		Page 80
1	MR. TISI: Actually, that's	1	they someone that you come in contact
2	fine.	2	with through the literature and your
3	MS. MILLER: Are you	3	understanding of the of cancer and
4	striking the question?	4	cancer research?
5	MR. TISI: No, I just	5	MS. MILLER: Objection.
6	it's fine.	6	That was two questions.
7	MS. MILLER: If you're not	7	THE WITNESS: Again, as I
8	striking the question	8	said, I mean, IARC is an
9	MR. TISI: She didn't	9	established committee that people
10	know she didn't know the	10	know do research on cancer to
11	answer.	11	determine whether or not there is
12	MS. MILLER: Well, she's	12	carcinogenic risk to humans and
13	checking her report and she'd like	13	people refer to them, as I do
14	to finish answering.	14	myself.
15	BY MR. TISI:	15	BY MR. TISI:
16	Q. Do you know without looking	16	Q. And are they when you say
17	in your report, Doctor?	17	refer to them, they rely on them,
18	A. I am not very good at all	18	correct?
19	acronyms and stuff.	19	MS. MILLER: Objection.
20	Q. Okay.	20	THE WITNESS: I'm not sure
21	A. And as you see I don't even	21	what you mean rely on them.
22	pronounce them correctly because I get	22	BY MR. TISI:
23	the letters mixed up. So I want to be	23	Q. You go
24	correct when I say what the title is	24	A. I mean, they go I go I
	Page 79		Page 81
1	of of that agency.	1	look at them to see what what their
2	And it's right here	2	evidence is and what their conclusions
3	somewhere. International Agency For	3	are.
4	Research on Cancer.	4	Q. Okay. Are they considered
5	Q. Have you ever been asked by	5	to be a respectable scientific
6	can IARC to participate in any	6	organization?
7	deliberation about whether or not a	7	MS. MILLER: Objection.
8	substance causes cancer?	8	THE WITNESS: They again,
9	A. I have not been on any IARC	9	they are an organization. I mean,
10	committee.	10	it depends upon what you mean by
11	Q. Has IARC a well respected	11	respectable. I mean, as I said
12	scientific organization?	12	they're well established. I use
13	MS. MILLER: Objection.	13	them as a reference. Many other
14	THE WITNESS: I believe IARC	14	people use them as references.
15	gets experts in the areas that	15	BY MR. TISI:
16	they need to adjust to address	16	Q. Okay. Now, this IARC report
17	the questions that come before	17	that you refer to in your report was
18	them or that they deem of	18	issued in 2010. But you do understand
19	interest.	19	that IARC looked at evidence before 2006,
20	BY MR. TISI:	20	correct? It was published in 2010, but
21	Q. Do you	21	the conclusions were reached as of 2006.
22	A. That's all I know.	22	Do you understand that to be true?
23	Q. Do you consider them a well	23	MS. MILLER: Objection.
24	respected scientific organization? Are	24	THE WITNESS: I I believe

21 (Pages 78 to 81)

	Page 82		Page 84
1	I'd have to look at the dates to	1	time that you wrote your report?
2	make sure. But I I do agree	2	A. I I actually looked it up
3	that the actual monograph came out	3	before as I was writing my report,
4	after they had done analyses and	4	before it was finalized.
5	the data that they use for that	5	Q. Okay. So you were familiar
6	analyses.	6	with it, but didn't list it in your
7	BY MR. TISI:	7	report as something that you had
8	Q. Now, you do know that in	8	considered in connection with your
9	December 2018, two months before you	9	opinions?
10	issued your litigation report for J&J's	10	A. I did not reference it.
11	lawyers, Health Canada looked at the	11	And and actually, I may have
12	question as to whether or not, in your	12	misspoken. I it's been such a blur
13	words, the epidemiology studies and	13	these last two year months I
14	scientific literature supported a causal	14	don't even years, it feels like years.
15	relationship between talcum powder	15	I I'm not sure exactly
16	products and ovarian cancer.	16	when I looked at what, so but I do
17	Do you do you know that	17	believe I did see it before I finalized
18	to be true?	18	my report, because I do reference the
19	MS. MILLER: Objection.	19	Taher meta-analysis.
20	THE WITNESS: So are you	20	Q. Right. Well, you know the
21	asking me if I'm aware that Health	21	Taher meta-analysis was commissioned by
22	Canada has issued a could	22	Health Canada and then used in the Health
23	could you rephrase that?	23	Canada report, you know that they are two
24	BY MR. TISI:	24	separate reports?
	Page 83		Page 85
1	Q. Yes. Yes. Do you know that	1	A. They are two separate
2	in December 2018 they issued a, call it a	2	reports.
3	draft report, about assessing the various	3	Q. Okay. Now, Health Canada,
4	lines of evidence using the Bradford Hill	4	just for the record, is the Canadian
5	criteria on the question about whether or	5	equivalent to the U.S. FDA?
6	not talcum powder products is capable of	6	A. That
7	causing ovarian cancer?	7	MS. MILLER: Objection.
8	A. I know that Health Canada	8	THE WITNESS: That's what
9	has issued did issue a draft report	9	I've been told. I I don't
10	late last year.	10	know. I didn't know one way or
11	Q. Okay. And you know that	11	the other.
12	they looked at the evidence through the	12	BY MR. TISI:
13	Bradford Hill criteria, correct?	13	Q. And other than for
14	MS. MILLER: Objection.	14	litigation purposes, and I mean on both
15	THE WITNESS: I can	15	sides, plaintiffs' experts and
16	you can I see the report,	16	defendants' experts, are you aware of any
17	please? I can't	17	more recent analysis of the causation
18	BY MR. TISI:	18	question through a Bradford Hill
19	Q. I will give it I will	19	framework than the one conducted by
20	give it to you. But you it was	20	Health Canada outside of litigation, are
21	provided to you. I saw it on your	21	you aware of anything else?
22	supplemental reliance list that was	22	A. That's a long question. Do
23	turned over to us last night.	23	you want to do I mean, I don't know

22 (Pages 82 to 85)

	Page 86		Page 88
1	A because you're putting	1	BY MR. TISI:
2	Bradford Hill in there and	2	Q. And in your in your
3	Q. Let me rephrase the question	3	practice of in your professional
4	then.	4	practice outside of litigation, is it
5	Do you know of any authors,	5	important for you to consider the
6	published or unpublished, apart from	6	opinions and views of other scientists
7	litigation, which has done a causation	7	who look at the same or similar questions
8	analysis of the question of ovarian	8	that you were asked to look at?
9	cancer and talc more recently than Health	9	A. That's a really broad
10	Canada in December of 2018?	10	question.
11	A. So the Health Canada report,	11	Q. Do you consider the views of
12	you mean, unpublished report, draft	12	other scientists?
13	report?	13	MS. MILLER: Objection.
14	Q. Correct.	14	THE WITNESS: When I do
15	A. Has there been another	15	research, I I look at
16	published study?	16	publications. So I believe those
17	Q. Has there been any other	17	probably are views of of other
18	published or unpublished analysis of the	18	scientists. I mean, to do
19	question of about whether ovarian cancer	19	research, you you need to look
20	and talcum powder products are linked,	20	at the literature.
21	is is that the most recent, outside of	21	BY MR. TISI:
22	litigation, that you can think of?	22	Q. Do you speak do you speak
23	A. Oh, out	23	to colleagues and get their opinions?
24	MS. MILLER: Objection.	24	A. If we're doing research in
	Page 87		Page 89
1	THE WITNESS: Outside of	1	the same area, I may speak to a colleague
2	litigation? I I don't know off	2	with respect to a research question I'm
3	the top of my head. I'd have to	3	working on.
4	go through and look at all the	4	Q. Do you go to meetings where
5	reports.	5	information is presented orally or on
6	BY MR. TISI:	6	posters?
7	Q. Okay. Okay. I'm going to	7	A. I go to many meetings, and
8	have marked as Exhibit 4 a document which	8	so often there are information presented
9	is the draft screening assessment from	9	orally and on posters.
10	Health Canada.	10	Q. And on on the whole, the
11	Now, this is on the	11	views of other scientists is information
12	supplemental reliance list that was	12	that you integrate into your knowledge
13	served on us last night, correct?	13	base when you look at scientific
14	A. I	14	questions, true?
15	MS. MILLER: I don't think	15	MS. MILLER: Objection.
16	she knows when it was served.	16	THE WITNESS: So it all
17	BY MR. TISI:	17	depends. It depends upon the
18	Q. Okay. Well all right.	18	quality of of the data. I look
19	You've seen this, correct?	19	at the data. I I you know,
20	A. I have seen this, correct.	20	determine whether or not the
21	Q. Okay.	21	conclusions that they reach is
22	(Document marked for	22	is justified by the data that they
23	identification as Exhibit	23	have and their study design. And
24	Ballman-4.)	24	so, I I you know, just

23 (Pages 86 to 89)

	Page 90		Page 92
1	because it's another scientist	1	Do you see that?
2	doesn't necessarily mean	2	MS. MILLER: Objection.
3	BY MR. TISI:	3	It's not a study. It's a table.
4	Q. Now	4	BY MR. TISI:
5	MS. MILLER: We've been	5	Q. Do you see that?
6	going about an hour. Is this a	6	A. I see a table that's titled
7	good time for a break or?	7	"Available Human Epidemiological Studies
8	MR. TISI: Actually let me	8	Investigating the Association of Perineal
9	finish this this area here.	9	Talc and Ovarian Cancer."
10	BY MR. TISI:	10	Q. And as you glance through
11	Q. In the other report, I'm	11	these, the studies that are listed here,
12	going to talk about, you were involved in	12	these are studies that are familiar to
13	the Viagra/Cialis litigation?	13	you, correct?
14	A. Yes.	14	A. These look like they include
15	Q. Okay. And you issued a	15	some of the case-control studies and
16	report in that litigation as well?	16	cohort studies that have been used in
17	A. I did.	17	other meta-analyses.
18	Q. You had a section in that	18	Q. Okay. They cover for
19	report dealing with regulatory issues and	19	example, I see the Cramer study from 1982
20	the regulatory views of various European	20	that we marked?
21	and and U.S. agencies. Do you recall	21	A. I see that.
22	that?	22	Q. Okay. And they cover
23	A. Can I see it, please?	23	case-control studies, population-based
24	Q. I don't have it with me,	24	and hospital-based studies.
	Page 91		Page 93
1	but but do you recall that, I'm asking	1	Do you see that?
2	whether you recall	2	A. I see that study type is
3	MS. MILLER: Objection.	3	listed. I don't know which are hospital
4	THE WITNESS: No, I I	4	based and which are population based.
5	don't recall any specifics.	5	Q. And if if you look on
6	BY MR. TISI:	6	Page 18, it includes the cohort studies.
7	Q. Okay.	7	Do you see that?
8	MS. MILLER: Give me time to	8	A. Yes. I see page 18 lists
9	object, please.	9	cohort studies.
10	Objection.	10	Q. And they considered the
11	THE WITNESS: So, sorry.	11	meta-analyses that you also looked at.
12	BY MR. TISI:	12	If you look at Page 16 under human
13	Q. Let me ask you this. Go to	13	studies. It has the sentence, "Several
14	Page 16	14	meta-analyses are available of the
15	MS. MILLER: Of what?	15	epidemiologic data have been published,
16	MR. TISI: Of Exhibit 4.	16	some very recently. (Huncharek, 2003;
17	BY MR. TISI:	17	Langseth, 2008; Terry, 2018; Berge, 2018,
18	Q. There's a Table 6.1. Do you	18	Penninkilampi and Eslick, 2018; Taher,
19	see that?	19	2018)."
20	A. I do see the table.	20	Do you see that those?
21	Q. And it's a study entitled	21	A. I see that. I didn't
22	"Available human epidemiologic studies	22	realize that Taher has been published.
23	investigating the association of perineal	23	Q. It's it's not been
24	talc use and ovarian cancer."	24	published yet.

1	Page 94		Page 96
1	A. But it says published.	1	Q. Next page next paragraph
2	Q. Okay. So let me ask you	2	says "Specificity." That's also a
3	this. Those are all studies that you're	3	Bradford Hill aspect?
4	familiar with, correct? You've seen	4	A. I see where it says
5	those?	5	"specificity."
6	A. I have seen those studies.	6	Q. "Temporality" is also a
7	Q. All right. And so does it	7	Bradford Hill aspect?
8	appear from looking at the studies, they	8	A. I see where it says
9	considered pretty much they considered	9	Q. Biologic gradient is also a
10	the same studies that you considered?	10	Bradford Hill aspect?
11	A. I I I mean, I'd have	11	A. I see that.
12	to go through and look and compare	12	Q. Biologic plausibility?
13	whether or not every single study here is	13	A. I see that section.
14	what every single study that I looked at.	14	Q. Coherence, they have that,
15	But I do it appears that, you know, I	15	correct?
16	recognize the names of many of these	16	A. I see that section.
17	studies here. I don't know if it's a	17	Q. Okay. And all of those are
18	complete match.	18	the same that's the same framework
19	Q. Okay. Now, can you turn to	19	that you used in your report, correct?
20	Page 19 through 21. On the very bottom	20	You considered all those factors?
21	of the page on 19 it has a section called	21	A. I applied the Bradford Hill
22	"Strength"?	22	criteria when I looked at the totality of
23	A. Yes, I see that.	23	the data.
24	Q. That's one of the Bradford	24	Q. And those are the you
	Page 95		Page 97
1	Hill criteria, correct?	1	applied those same factors from Bradford
2	A. Mm-hmm.	2	Hill that I just described, you looked
3	Q. And if you look on the next	3	at you looked at you looked at
4	page?	4	strength, consistency, specificity,
5	A. Wait. I'm sorry. I don't	5	temporality, biologic gradient, biologic
6	know if this is actually referring to the	6	plausibility, and coherence. You looked
7	Bradford Hill criteria. It just says	7	at all of those things, correct?
8	"Strength."	8	A. When I evaluate the totality
9	Q. Well, if you look at the	9	of the data, I did look at all the
10	sentence above, it says Hill criteria,	10	criteria of the Bradford Hill
11	1965, the paragraph directly above?	11	Q. Okay. Now
12	A. Okay.	12	A framework.
13	Q. Okay. So if you look at the	13	Q. If you go to Page 19 of 21
14	next page, Page 20, it talks	14	of the report?
15	MS. MILLER: You're positing	15	MS. MILLER: Of her report
16	that strength means strength of	16	or of the draft analysis?
17	association? Is that	17	MR. TISI: Of the draft
18	MR. TISI: Yes, correct.	18	MS. MILLER: Draft screening
19	BY MR. TISI:	19	assessment?
20	Q. Okay. Next next page it	20	MR. TISI: Of Exhibit Number
	has consistency. That's also a Bradford	21	4.
$\perp \Delta \perp$			
21 22	Hill criteria?	122	BY MR. TISI:
22 23	Hill criteria? A. I see where it says	22 23	BY MR. TISI: Q. On Page 28 at the very

25 (Pages 94 to 97)

	Page 98		Page 100
1	A. So we're not on 21?	1	dishonest, let's go back. They say it
2	MS. MILLER: You said 19 to	2	again, exactly after on Page 21, after
3	21.	3	the discussion of coherence. They say
4	MR. TISI: I'm actually	4	the most do you see where it says,
5	moving through. 28 at the very	5	"The most recent meta-analyses detailed
6	top.	6	above (Taher, 2018) and consistent with
7	BY MR. TISI:	7	the Hill criteria, suggest a small but
8	Q. You would agree with me that	8	consistent statistically significant
9	after discussing the Bradford Hill	9	positive association between ovarian
10	criteria or Bradford Hill analysis that	10	cancer and perineal exposure to talc.
11	we just talked about before, they say the	11	Further available data are indicative of
12	following: "The meta-analyses of the	12	a causal effect."
13	available human studies in the	13	
14		14	Do you see that? A. I see the words on that
	peer-reviewed literature indicate a	15	
15 16	consistent and statistically significant	16	page. But I'd like to point out that
	positive association between perineal	17	Q. No. There's no question
17 18	exposure to tale and ovarian cancer.	18	pending.
	Further available data are indicative of	19	MS. MILLER: Excuse me. I
19	a causal effect."		think she should be allowed to
20	Do you see that?	20	finish her statement.
21	MS. MILLER: Objection. You	21	MR. TISI: I'd like to point
22	said after the Bradford Hill?	22	out. No. I asked her if those
23	I'm confused.	23	were the words did I read that
24	THE WITNESS: It's on 28.	24	correctly. There's nothing more
	Page 99		Page 101
1	MR. TISI: You don't need to	1	to say, Counsel.
2	be.	2	MS. MILLER: I think we're
3	Yes.	3	ready for a break. I asked for a
4	BY MR. TISI:	4	break five minutes ago.
5	Q. So after having looked at	5	MR. TISI: I am just I'm
6	the Bradford Hill criteria, or Bradford	6	just going to mark an exhibit, and
7	Hill aspects, they say the following:	7	then we'll move on.
8	"The meta-analyses of available human	8	I'm going to attach the
9	studies in the peer-reviewed literature	9	MS. MILLER: Why don't we
10	indicate a consistent and statistically	10	just mark it after the break?
11	significant positive association between	11	MR. TISI: No, I'm going to
12	perineal exposure to talc and ovarian	12	mark it right now.
13	cancer. Further available data are	13	THE WITNESS: I would really
14	indicative of a casal effect."	14	like a break soon.
15	Do you see that?	15	MR. TISI: We're going to
16	MS. MILLER: Objection.	16	take it as soon as I mark it.
17	That's a dishonest question.	17	I'm going to mark the Health
18	BY MR. TISI:	18	Canada conclusion that I read into
19	Q. You can	19	the record on Page 28, and I'm
20	A. That's what's written on the	20	going to mark that as Exhibit 5.
21	page there. They do say that.	21	MS. MILLER: I'm going to
22	Q. Okay. And they say it	22	object to that.
23	again. Actually, if you go back. Since	23	THE WITNESS: The Health
24	counsel was saying that I was being	24	Canada draft conclusion.

26 (Pages 98 to 101)

	Page 102		Page 104
1	BY MR. TISI:	1	exhibit. Here you go.
2	Q. Yes.	2	(Document marked for
3	A. And I don't see draft there.	3	identification as Exhibit
4	Q. Okay. We can it says	4	Ballman-5.)
5	MS. MILLER: Also, where	5	THE VIDEOGRAPHER: Off the
6	does it say "conclusion" in the	6	record? Remove your microphone
7	document?	7	please. The time is 10:10 a.m.
8	BY MR. TISI:	8	(Short break.)
9	Q it actually says it	9	THE VIDEOGRAPHER: We are
10	says draft screening assessment.	10	back on the record. The time is
11	MS. MILLER: Actually,	11	10:25 a.m.
12	conclusion would be this	12	BY MR. TISI:
13	(indicating). The conclusion is	13	Q. Doctor, going back to
14	what's on Page 29. So I object	14	Exhibit Number 5, the Health Canada
15	MR. TISI: That's not you	15	statement. We'll call it a statement.
16	could you could say what you	16	The they use the word
17	MS. MILLER: I object to	17	consistent.
18	this	18	Do you see that?
19	MR. TISI: You can object.	19	A. So when I read this
20	Object.	20	statement and it's also referring to
21	MS. MILLER: Okay. Let me	21	meta-analyses. And so it appears that
22	finish.	22	it's not just one meta-analysis. So
23	MR. TISI: Object. Fine.	23	so they are saying that the meta-analyses
24	MS. MILLER: You are not	24	are consistent.
	Page 103		Page 105
1	Page 103 letting me finish my sentence,	1	Page 105 Q. Okay. And the meta-analyses
1 2		2	
	letting me finish my sentence,		Q. Okay. And the meta-analyses
2	letting me finish my sentence, sir.	2	Q. Okay. And the meta-analyses are made up of all of the of all of
2	letting me finish my sentence, sir. MR. TISI: I don't need	2 3 4 5	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data.
2 3 4	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine.	2 3 4 5 6	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it
2 3 4 5 6 7	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit,	2 3 4 5 6 7	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up
2 3 4 5 6 7 8	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada	2 3 4 5 6 7 8	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results.
2 3 4 5 6 7 8 9	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29	2 3 4 5 6 7 8	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all
2 3 4 5 6 7 8 9	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion	2 3 4 5 6 7 8 9	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct?
2 3 4 5 6 7 8 9 10	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the	2 3 4 5 6 7 8 9 10	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are
2 3 4 5 6 7 8 9 10 11	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the	2 3 4 5 6 7 8 9 10 11	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in
2 3 4 5 6 7 8 9 10 11 12 13	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion.	2 3 4 5 6 7 8 9 10 11 12	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it
2 3 4 5 6 7 8 9 10 11 12 13 14	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion. MS. MILLER: This is not a	2 3 4 5 6 7 8 9 10 11 12 13	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it would be very strange if they didn't come
2 3 4 5 6 7 8 9 10 11 12 13 14 15	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion. MS. MILLER: This is not a conclusion.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it would be very strange if they didn't come up with similar numbers.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion. MS. MILLER: This is not a conclusion. MR. TISI: Okay.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it would be very strange if they didn't come up with similar numbers. Q. But you you think there
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion. MS. MILLER: This is not a conclusion. MR. TISI: Okay. MS. MILLER: So that's a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it would be very strange if they didn't come up with similar numbers. Q. But you you think there is no consistency, correct, your opinion
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	letting me finish my sentence, sir. MR. TISI: I don't need object is fine. MS. MILLER: No, it's not fine. I object to this exhibit, because the Health Canada conclusion is actually on Page 29 where it says conclusion MR. TISI: That's the regulatory that's the regulatory conclusion. MS. MILLER: This is not a conclusion. MR. TISI: Okay. MS. MILLER: So that's a false statement there. Health	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Okay. And the meta-analyses are made up of all of the of all of the observational studies, correct? A. But the meta-analyses are all analyzing essentially the same data. They are reworking the same data. So it would be strange if they would come up with quite different results. Q. So and they are all consistent, correct? A. But as I said, they are they are analyzing exact same data in essentially the same way. And so it would be very strange if they didn't come up with similar numbers. Q. But you you think there is no consistency, correct, your opinion is there is no consistency in the
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27 (Pages 102 to 105)

	Page 106		Page 108
1	was not met.	1	MS. MILLER: Objection.
2	BY MR. TISI:	2	THE WITNESS: So I'm not
3	Q. Okay. And they say that	3	sure what available data they are
4	there was consistency shown when they	4	referring to, and being indicative
5	looked at the meta-analyses, correct?	5	of a causal effect, this is is
6	A. Well, they are saying	6	taken out of context. I would
7	meta-analyses are consistent. But as I	7	have to go back and and read
8	said, they keep meta-analyses, these	8	through the entire document. I
9	meta-analyses are essentially all	9	mean, I don't know what basis. I
10	analyzing the same data. So reworking	10	don't know what data that that's
11	the same data is like doing a	11	like being based upon.
12	replication. So one would expect that	12	BY MR. TISI:
13	the numbers are similar.	13	Q. Well, we went through that,
14	Q. Well, the meta-analyses,	14	Doctor. We went through and that's why I
15	depending upon their time frame, did not	15	took the time and showed you all the
16	all use the same studies, did they?	16	studies that they looked at. And I I
17	A. They the earlier ones	17	showed you the Bradford Hill aspects that
18	used a subset of the studies used in the	18	they analyzed and they went through all
19	later ones, because there were additional	19	of that.
20	studies done since when the earlier ones	20	And based upon what they
21	were done.	21	looked at, okay, they concluded that the
22	Q. So they so they were not	22	totality of the evidence was indicative
23	all the same, correct?	23	of a causal effect, correct?
24	A. Essentially though, I mean	24	MS. MILLER: Objection.
	5 105		
	Page 107		Page 109
1		1	Page 109 THE WITNESS: I think you
1 2	in in statistics and in epidemiology, you know, reworking data that are not	1 2	
	in in statistics and in epidemiology,		THE WITNESS: I think you
2	in in statistics and in epidemiology, you know, reworking data that are not	2	THE WITNESS: I think you just that's a slightly
2	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we	2 3	THE WITNESS: I think you just that's a slightly different question.
2 3 4	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and	2 3 4	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI:
2 3 4 5	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation.	2 3 4 5	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay.
2 3 4 5 6	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further	2 3 4 5 6	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all
2 3 4 5 6 7 8 9	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that?	2 3 4 5 6 7 8	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms
2 3 4 5 6 7 8 9	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated	2 3 4 5 6 7 8 9	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I
2 3 4 5 6 7 8 9 10	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that?	2 3 4 5 6 7 8 9 10	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a
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2 3 4 5 6 7 8 9 10 11 12 13	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated there. I I have no idea what that is based upon. That I do see that statement.	2 3 4 5 6 7 8 9 10 11 12	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a category that said strength, they had a category that said I didn't look through carefully to see what exact studies they looked at.
2 3 4 5 6 7 8 9 10 11 12 13	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated there. I I have no idea what that is based upon. That I do see that statement. Q. And you disagree with that,	2 3 4 5 6 7 8 9 10 11 12 13	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a category that said strength, they had a category that said I didn't look through carefully to see what exact studies they looked at. Q. Did you didn't you do
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated there. I I have no idea what that is based upon. That I do see that statement. Q. And you disagree with that, correct? A. I I don't know if I agree or disagree with it. Q. So A. I mean I I that's what they wrote. I do agree with that.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a category that said strength, they had a category that said I didn't look through carefully to see what exact studies they looked at. Q. Did you didn't you do that when you were preparing for your deposition today, didn't weren't you interested to see how they reached this conclusion which was different than yours? A. I you know, I glanced and
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated there. I I have no idea what that is based upon. That I do see that statement. Q. And you disagree with that, correct? A. I I don't know if I agree or disagree with it. Q. So A. I mean I I that's what they wrote. I do agree with that. Q. Okay. Do you agree that the available data is indicative of a causal	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a category that said strength, they had a category that said I didn't look through carefully to see what exact studies they looked at. Q. Did you didn't you do that when you were preparing for your deposition today, didn't weren't you interested to see how they reached this conclusion which was different than yours? A. I you know, I glanced and I read through the document as you noted. I did not cite it in my report.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	in in statistics and in epidemiology, you know, reworking data that are not completely independent of each other, we would expect similar results and correlation. Q. And they say, "Further available data are indicative of a causal effect." Do you see that? A. I I see what's stated there. I I have no idea what that is based upon. That I do see that statement. Q. And you disagree with that, correct? A. I I don't know if I agree or disagree with it. Q. So A. I mean I I that's what they wrote. I do agree with that. Q. Okay. Do you agree that the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	THE WITNESS: I think you just that's a slightly different question. BY MR. TISI: Q. Okay. A. But we didn't look at all the studies that they looked at in terms of, we just went through and and I quickly glanced and saw that they had a category that said strength, they had a category that said I didn't look through carefully to see what exact studies they looked at. Q. Did you didn't you do that when you were preparing for your deposition today, didn't weren't you interested to see how they reached this conclusion which was different than yours? A. I you know, I glanced and I read through the document as you noted.

28 (Pages 106 to 109)

	Page 110		Page 112
1	it could change. And I didn't want	1	know what I mean.
2	all my report is essentially based upon	2	THE WITNESS: I billed for
3	published literature. I didn't want to	3	\$56,000.
4	incorporate a draft of something that	4	BY MR. TISI:
5	might change, and we don't know which way	5	Q. And and that will
6	they may change due to all the comments	6	A. And I anticipate I will be
7	they get. The I believe it's out for	7	paid.
8	comment right now, so	8	Q. Right. And and you have
9	Q. Well, that was that's	9	incurred additional time from the time of
10	going to be my question too.	10	your last billing until today, correct?
11	First of all, Health Canada	11	A. Yes, I have.
12	is not involved in this litigation to	12	Q. Okay. About how much time?
13	your knowledge, is it?	13	A. Probably on the order, 20,
14	A. I have no idea one way or	14	30 hours.
15	the other.	15	Q. Okay. And so would it be
16	Q. But you are, you are a paid	16	fair to say that as of today, you will
17	witness, correct?	17	ultimately bill anywhere between 75 and
18	A. I'm	18	\$100,000?
19	MS. MILLER: Objection.	19	A. If the math works out.
20	BY MR. TISI:	20	Q. Okay. And so you are a paid
21	Q. You're a paid you've been	21	expert in this case, true?
22	paid for your the work you did on your	22	MS. MILLER: Objection.
23	report, correct?	23	THE WITNESS: I am being
24	A. I am an expert witness for	24	paid for my expert opinion.
	Page 111		Page 113
1	Johnson & Johnson. I really haven't been	1	BY MR. TISI:
2	paid yet. I'm still waiting for	2	Q. Okay. Now, would you agree
3	sorry.	3	with me let me put it this way. You
4	Q. Okay. You are going to	4	would not write this you do not agree
5	well, I am sure I am sure Susan is	5	based upon your analysis of the evidence,
6	good for her good for her word on	6	with the statement in Exhibit Number 5
7	that. I'm sure she will pay you	7	from Health Canada. You would disagree
8	imminently.	8	with that, true?
9	A. Yes.	9	MS. MILLER: Objection.
10	Q. But but you have been	10	Asked and answered twice.
11	paid anywhere between, up and through, I	11	MR. LOCKE: And I just want
12	saw your bill, up and through it's	12	to assert an objection. I don't
13	\$56,000. But I assume you've billed	13	believe I believe there are
14	since then.	14	words italicized here that are not
15	How much have you	15	italicized in the original.
16	MS. MILLER: Objection. She	16	MR. TISI: And that's fine.
17	just said she hasn't been paid,	17	You're exactly right, Tom.
18	and you just said you have been	18	BY MR. TISI:
19	paid.	19	Q. So I will make a
20	MR. TISI: Fine. I'm not	20	representation I that I italicized
21	I'm not quibbling with you.	21	those because I was going to ask you
22	MS. MILLER: Well, I mean,	22	questions about those. But the record
23	but just MR. TISI: You know you	23 24	will reflect that those are not italicized in the original.
24		. , /	TRULING OF THE OFFICIAL

29 (Pages 110 to 113)

	Page 114		Page 116
1	That being the case, you	1	looked at are indicative of a causal
2	would not write the statement that Health	2	effect?
3	Canada did because you do not believe	3	A. So it is my professional
4	that the data as a whole that you looked	4	opinion that there's no evidence of a
5	at was indicative of a causal effect?	5	causal relationship between perineal or
6	MS. MILLER: Objection.	6	genital talcum powder exposure and
7	THE WITNESS: Again, you	7	ovarian cancer.
8	know, this is taken out of their	8	Q. So you do not think there's
9	report at some section, and as we	9	a causal effect?
10	discussed I believe it's not even	10	A. That is my opinion.
11	in their conclusions. And I I	11	Q. Okay. So and Health
12	don't know I mean, I wrote in	12	Canada, at least as of today, has a
13	my expert report what I wrote. So	13	contrary view, true, subject to your view
14	I don't have a statement in my	14	that they may change? But as of today,
15	expert report that says this.	15	they have a different view based upon
16	BY MR. TISÎ:	16	their analysis of the Bradford Hill
17	Q. And you would disagree with	17	criteria, true?
18	that those statements, correct?	18	MR. LOCKE: Objection.
19	A. I just	19	MS. MILLER: Objection.
20	MS. MILLER: Objection.	20	THE WITNESS: Yeah, I
21	THE WITNESS: I just looked	21	I I would have to again read
22	at the data as a whole and did my	22	through this carefully.
23	analyses and came up with the	23	BY MR. TISI:
24	conclusion that I came up with.	24	Q. Okay.
	Page 115		Page 117
1	Again, this is a draft. I	1	A. I would agree that they did
2	mean, I yeah.	2	not write a sentence exactly the way I
3	BY MR. TISI:	3	wrote a sentence there.
4	Q. So your conclusion	4	You know, again, I'd have to
5	A. I don't agree or disagree.	5	read through this carefully to make sure
6	I'm just saying that	6	that this this this excerpt here
7	Q. So you don't disagree with	7	reflects the entirety of their analyses
8	this?	8	and their opinions.
9	A. I said I don't agree or	9	Q. Well, it's not unusual,
10	disagree. And I'm saying that when I	10	Doctor, for experts in epidemiology to
11	look at the science and I did my	11	disagree on issues of causation when they
12	analyses, I have put forward my	12	do their analysis, true?
13	conclusion.	13	A. It depends.
14	I obviously you know,	14	Q. Okay. Well, in many you
15 16	even if I believed what they did, I would	15 16	know, there are experts in fact, you
17	probably not have the exact same words. That would be plagiarism.	$\frac{16}{17}$	mention it in your report that some experts believe that ovarian cancer
18	Q. But you would just okay.	18	some people believe that ovarian cancer
19	Let me ask you this statement. Let me	19	can be caused by talcum powder; other
20	ask you the question directly.	20	people don't. That's not unusual; is
21	Do you believe that the data	21	that true?
22	are indicative of a causal effect,	22	A. So when I did my analyses
23	irrespective of this statement? Do you	23	and looked at the data, I don't think
. – –			
24	believe that the data as a whole that you	24	there's any scientific basis for any

30 (Pages 114 to 117)

	Page 118	3	Page 120
1	other opinion that there is no evidence,	1 _	and filibuster
2	credible evidence, of a causal	1 2 3 4 5 6 7 8	MS. MILLER: She's not
3	relationship between	1 3	filibustering. You're trying to
4	Q. That is not my question.	4	put words in her mouth. She is
5	You know, honestly, at some point I	1 5	trying to answer as an
6	really am going to have to call the	6	epidemiologist from her scientific
6 7 8 9	judge.	1 7	experience, and you're trying to
8	My question to you is, it is	8	put words in her mouth for sound
9	not unusual for experts in epidemiology	9	bytes you want. And you're
10	to look at the same data and come to	10	frustrated because she's trying to
11	different conclusions, true?	11	give you honest, complete answers
12	MS. MILLER: Please let her	12	as an epidemiologist.
13	finish her answer without	13	MR. TISI: Oh, that's so
14	MR. TISI: Well, I'm not	14	good of you. I'm so I'm so
15	I'm not going to sit	15	glad that you said that.
16	MS. MILLER: She was in the	16	BY MR. TISI:
17	middle of a sentence.	17	Q. So, Doctor, in epidemiology,
18	MR. TISI: I'm not I am	18	cancer, cancer with cigarettes, for a
19	not going to sit here and listen	19	long time there was a debate in the
20	to her filibuster. I'm not going	20	scientific community about whether
21	to do it.	21	cigarettes cause cancer, true?
22	MS. MILLER: She's not	22	A. I haven't looked at that
23	filibustering. She's answering	23	literature in depth. I mean, possibly.
24	the question. You're trying to	24	I mean, I'd have to
	Page 119)	Page 121
		1 _	
1 2	put words in her mouth.	1 _	Q. Okay. It's not unusual in
1 2 3	put words in her mouth. MR. TISI: I am not I'm	1 _	Q. Okay. It's not unusual in the field of epidemiology for experts in
1 2 3	put words in her mouth. MR. TISI: I am not I'm allowed	1 _	Q. Okay. It's not unusual in the field of epidemiology for experts in epidemiology to look at data and reach
1 2 3 4 5	put words in her mouth. MR. TISI: I am not I'm allowed MS. MILLER: You're trying	1 _	Q. Okay. It's not unusual in the field of epidemiology for experts in epidemiology to look at data and reach different conclusions in their
1 2 3 4 5	put words in her mouth. MR. TISI: I am not I'm allowed MS. MILLER: You're trying to put words can you let me	1 _	Q. Okay. It's not unusual in the field of epidemiology for experts in epidemiology to look at data and reach different conclusions in their professional judgment, true?
1 2 3 4 5 6 7	put words in her mouth. MR. TISI: I am not I'm allowed MS. MILLER: You're trying to put words can you let me finish my sentence?	1 2 3 4 5 6 7	Q. Okay. It's not unusual in the field of epidemiology for experts in epidemiology to look at data and reach different conclusions in their professional judgment, true? MS. MILLER: Objection.
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7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	put words in her mouth. MR. TISI: I am not I'm allowed MS. MILLER: You're trying to put words can you let me finish my sentence? MR. TISI: No, actually yours MS. MILLER: You're not going to let me finish my sentence? MR. TISI: You're limited to "objection." That's what you're limited to in this deposition. MS. MILLER: I think that if you're not allowing MS. SHARKO: I don't think that's true. MS. MILLER: the witness to finish her sentences. I am allowed to speak. And if you want	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. Okay. It's not unusual in the field of epidemiology for experts in epidemiology to look at data and reach different conclusions in their professional judgment, true? MS. MILLER: Objection. THE WITNESS: So again, I all I can say is I looked at the data in its totality. I did the analyses and wrote the report with all sort of my methodology and how I arrived at the opinions. And I do not believe there's scientific credible evidence that there is a causal relationship between talcum perineal talcum powder exposure and ovarian cancer. To me, that's the BY MR. TISI: Q. So, all right. That wasn't my question.

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	Page 122		Page 124
1 2 3 4 5 6 7 8 9	the equation now. So you don't have to	1	again?
2	answer me the question about what you did	2	Q. Would you agree with me that
3	in talc. Okay.	3	whether or not talcum powder products
4	Is it not a true statement	4	cause ovarian cancer, the question you're
5	that in general, epidemiologists when	5	here to answer for us today, is an
6	looking at a causation question, can look	6	important public health issue?
7	at the same data and reach different	7	A. I believe what's an
8	conclusions? Does that not happen?	8	important public health issue is is
9	MS. MILLER: Objection.	9	trying to reduce the mortality from
10	THE WITNESS: I think it has	10	ovarian cancer.
11	to depend upon what the question	11	Q. Okay. And the question
12	is of interest and what level of	12	you understand that there's been a debate
13	data are available. I mean, I	13	in the medical and scientific community
14	cannot answer that question	14	for decades on the question of whether or
15	without knowing more specifics.	15	not talcum powder products cause ovarian
16	BY MR. TISI:	16	cancer, correct?
17	Q. Have you responded you	17	MS. MILLER: Objection.
18	said there's a comment period. The	18	BY MR. TISI:
19	comment period was from December 6th	19	Q. IARC addressed it. FDA
20	through February 6th.	20	addressed it. Health Canada addressed
21	Did you respond to	21	it. It's been in the published
22	comment do you feel I gather you	22	literature. You would agree with me on
23	feel strongly about your opinions,	23	that, right?
24	correct?	24	MS. MILLER: Are you asking
	Page 123		Page 125
1	A. I don't know if I feel	1	the last question that I objected
2	strongly or not. I would say that I I	2	to or have you changed your
3	believe my opinions are based upon the	3	question?
4	science.	4	BY MR. TISI:
5	Q. Well, you would agree with	5	Q. I'm asking you the question
6	me that ovarian cancer is a serious	6	I asked. You
7	disease?	7	MS. MILLER: Which?
8	A. It kills women. It's a	8	BY MR. TISI:
9	serious disease.	9	Q. You understand that various
10	Q. Okay. And you would agree	10	agencies have looked at this question,
11	with me that the mortality involved in	11	that there has been a debate in the
12	ovarian cancer is very, very high?	12	medical and scientific community as to
13	A. I I know that there are	13	the meaning of the science on ovarian
14	different subtypes of ovarian cancer and	14	cancer and talc, true or not true?
15	I the high grade serous has has	15	MS. MILLER: Objection.
16	is not a very good prognosis. I agree a	16	THE WITNESS: There is
17	lot of people die from it.	17	different parts in there. What
18	Q. And would you agree that	18	I I would say is IARC looked at
19	whether or not, irrespective of your view	19	the question. I'm not sure how
20	of the evidence, whether or not talcum	20	deeply the FDA has looked at it.
21	powder products can cause ovarian cancer,	21	And I know that there's a draft
22	would be an important public health	22	Health Canada document at this
23	issue?	23	point. So those agencies have
24	A. What could you ask that	24	done something with respect to

	Page 126		Page 128
1	this.	1	Representatives held hearings on talc and
2	BY MR. TISI:	2	causation. Do you know that?
3	Q. And you agree that the	3	A. I did not know that.
4	the questions that they are wrestling	4	Q. Do you know that one of the
5	with is an important one?	5	epidemiologists, Dr. McTiernan, you know
6	MS. MILLER: Objection.	6	her?
7	THE WITNESS: Important in	7	A. I know the name.
8	what sense?	8	Q. Okay. You know she appeared
9	BY MR. TISI:	9	at that hearing. Do you know anything
10	Q. Important public health	10	about that?
11	question. They are addressing an	11	A. Again, I I wasn't aware
12	important public health question.	12	of the hearing so I do not know. I so
13	A. If if there were evidence	13	I wouldn't know that she appeared.
14	that there was a causal relationship	14	Q. Did J&J ask you, say, you
15	between perineal and genital talcum	15	know, Dr. Ballman, you're an expert in
16	exposure and ovarian cancer, if there was	16	the field of analyzing causation from an
17	evidence that that is the case, then it	17	epidemiology standpoint, would you
18	would translate into a public probably	18	represent us before the House of
19	a considerable public health.	19	Representatives on this important
20	Q. Okay. And you feel strongly	20	question?
21	about your opinion that there is no such	21	MS. MILLER: Objection.
22	evidence, true?	22	THE WITNESS: I was not
23	A. Again, my I don't I	23	contacted by J&J to appear in a
24	don't know how to use that word strongly.	24	congressional.
	Page 127		Page 129
1	I believe that my evidence	1	BY MR. TISI:
2	is my statement is based upon my	2	Q. Have you presented your
3	scientific analyses of the data in	3	opinions on the subject to your medical
4	total	4	and scientific colleagues at Weill
5	Q. Have you shared	5	Cornell?
6	A and is supported.	6	MS. MILLER: Objection.
7	Q. I apologize.	7	THE WITNESS: I have not
8	Were you did you share	8	discussed this with my colleagues
9	that your opinions with Health Canada?	9	at Weill Cornell.
10	A. I did not.	10	BY MR. TISI:
11	Q. Okay. Did you have you	11	Q. I mean, there are you
12	tried to contact the FDA?	12	have an oncology division, and a
13	A. I have not done that.	13	gynecology division at Weill Cornell I
14	Q. Have you contacted the	14	assume?
15	National Cancer Institute to tell them	15	A. I'm not sure what their
16	there's no problem?	16	terms are. But there is a group that
17	MS. MILLER: Objection.	17	works on gynecology gynecology
18	THE WITNESS: I I	18	issues gynecology, and there is a
19	wouldn't know who to contact. I	19	hem/onc. And I don't know if they are
20	don't even know if there's such a	20	divisions or departments, that sort of
21	mechanism to do so.	21	thing.
22	BY MR. TISI:	22	Q. Have you reached out to them
23	Q. Okay. Well, you know last	23	and said to to any of them, gee, you
24	week the United States House of	24	know, I have done this causation

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	Page 130		Page 132
1	analysis, and, you know, you really could	1	that that that that that
2	tell women they can use talcum powder	2	issue has been raised, that
3	products everyday for the next 40 years	3	that I don't know who is saying
	and it be not be a problem in terms of		• •
4		4	that there may be asbestos in
5	increasing their risk for ovarian cancer.	5	talcum powder.
6	MS. MILLER: Objection.	6	BY MR. TISI:
7	BY MR. TISI:	7 8	Q. So you have not reviewed
8	Q. Have you done that?	8	evidence in this case that asbestos may
9	MS. MILLER: Objection.	9	or may not be in the talcum powder
10	THE WITNESS: I I have	10	products that Johnson & Johnson sold?
11	not contacted any I have not	11	MS. MILLER: Objection.
12	discussed this with with any	12	THE WITNESS: So I believe
13	one of my colleagues.	13	my opinion my not believe.
14	BY MR. TISI:	14	But my opinion is based upon
15	Q. If if one of your	15	talcum powder, whatever it's
16	colleagues at Weill Cornell, your	16	composed of. So I don't know
17	oncology colleagues, came up to you and	17	what's in it. But talcum powder,
18	said look, I heard you were involved in	18	whatever it's composed of, I don't
19	the looking at talcum powder products	19	find any evidence or credible
20	and ovarian cancer for the in the	20	evidence that there's a causal
21	litigation involving Johnson & Johnson,	21	relationship.
22	you've done your analysis, do you think	22	BY MR. TISI:
23	it's okay if I tell my patients that they	23	Q. Well, if there was asbestos
24	can dust everyday for the next 30 years	24	in talcum powder products, would you, if
	Page 131		Page 133
1	and it won't increase the risk?	1	that same oncologist at Weill Cornell
2	MS. MILLER: Objection.	2	came up to you and said Dr
3	THE WITNESS: I I would	3	Dr. Ballman, I know that you are involved
4	say it's my professional opinion	4	in litigation. You've looked at the
5	that there's no evidence of a	5	causation question. If there is asbestos
6	causal relationship between	6	in the talcum powder that my patients
7	perineum-talcum powder exposure	7	use, is that okay for her to dust every
8	and ovarian cancer.	8	day? What would you tell them?
9	I'm not a gynecologist. So	9	MS. MILLER: Objection.
10	I would not presume to tell a	10	THE WITNESS: I would say
11	gynecologist what they should tell	11	the same thing I answered to the
12	their patients with with	12	talcum powder question, because I
13	respect to anything.	13	analyze whether or not there's
14	BY MR. TISI:	14	evidence of a causal relationship
15	Q. Now, you do understand that	15	between talcum powder whatever
16	in this case there is an allegation that,	16	is in it I have no idea what's
17	among other things, that talcum powder	17	in it causes ovarian cancer.
18	products used by manufactured and sold	18	And so I would say that
19	by J&J contained asbestos. Have you seen	19	that's my opinion. And again I
20	that?	20	would not presume to tell a
21	MS. MILLER: Objection.	21	gynecologist what they should tell
22	THE WITNESS: I think I saw	22	their patients one way or another,
23	somewhere in the media, it might	23	because I am not an M.D.
24	have been a tweet or something,	24	BY MR. TISI:

34 (Pages 130 to 133)

	Page 134		Page 136
1	Q. Well, one of the one of	1	me let me ask you this way. Let me
2	the aspects of Bradford Hill and we're	2	give you a hypothetical. Let me withdraw
3	going to talk about this is the issue	3	the question.
4	of biologic plausibility, correct?	4	Okay. If we had a bottle,
5	A. That is one of the criteria	5	and the bottle was full of asbestos and
6	within the Bradford Hill framework.	6	nothing else. Would you tell would
7	Q. If I'm going to ask you	7	you tell a woman that she could use it to
8	to assume for the purposes of my question	8	dust her perineal her perineum?
9	that talcum powder products you would	9	MS. MILLER: Objection. I
10	agree with me that asbestos is a	10	think she said
11	carcinogen, correct?	11	MR. TISI: I don't I
12	MS. MILLER: Objection.	12	don't care what you think she
13	THE WITNESS: I have not	13	said. Objection.
14	looked into the talcum powder data	14	MS. MILLER: You've asked
15	and literature. So I only know	15	this question 100 times.
16	that there seems to be a strong	16	MR. TISI: I'm asking I'm
17	association that increases the	17	asking
18	risk of mesothelioma, so a risk	18	MS. MILLER: She said she
19	factor for sure, between asbestos	19	doesn't give advice.
20	exposure and mesothelioma.	20	MR. TISI: She's not. I'm
21	BY MR. TISI:	21	asking I'm asking you a
22	Q. And looking at the issue of	22	hypothetical.
23	whether or not there's a biologically	23	BY MR. TISI:
24	plausible explanation for the	24	Q. If if I had a bottle of
	Page 135		Page 137
1	increased an association, would the	1	pure asbestos, would that be a
2	presence of a carcinogen be important to	2	biologically let me let me give you
3	look at?	3	a different hypothetical.
4	 A. So looking at biological 	4	MS. MILLER: Are you
5	plausibility, what would be important is	5	striking the question?
6	that in the biological experiments that	6	MR. TISI: Yes, I am,
7	are done, that they use talcum powder,	7	Counsel.
8	the same type of talcum powder that women	8	BY MR. TISI:
9	use, to see if that talcum powder leads	9	Q. If I had five epidemiology
10	to transformation in animals, let's say,	10	studies all showed an increased risk of
11	to ovarian cancer.	11	ovarian cancer and asbestos, and I had a
12	Q. But if one of the components	12	bottle of asbestos, would you say that
13	was a known carcinogen, wouldn't that be	13	that would be okay to dust on the
14	a plausible explanation for the	14	perineum?
15	association seen in the meta-analyses?	15	MS. MILLER: Objection.
16	MS. MILLER: Objection.	16	THE WITNESS: So that's
17	THE WITNESS: Again, I mean,	17	difficult. First of all, I would
18	the question isn't asbestos. The	18	want to know what the five
19	question is whether talcum powder,	19	epidemiology studies are, if there
20	however it's composed	20	are, you know, observational
21	BY MR. TISI:	21	studies. I mean, I don't know.
22	Q. And if it's composed	22	I would need to know the
23	partially of asbestos, if it's composed	23	dose. The dose makes the poison.
24	partially of asbestos let me let	24	I don't know. I did not do any

35 (Pages 134 to 137)

	Page 138		Page 140
1	study on asbestos, so I wouldn't	1	I can't imagine why anyone would dust
2	render an opinion to a woman what	2	with asbestos. So my question my
3	she should or should not use in	3	second question would be, if the bottle
4	general either.	4	was half asbestos and half talc, would
5	BY MR. TISI:	5	you say that that would be okay?
6	Q. Would you tell a family	6	MS. MILLER: Objection.
7	would you tell a family member it's okay	7	THE WITNESS: So my what
8	to dust with asbestos?	8	I was going to try to finish in
9	MS. MILLER: Please stop	9	the last one is, it would be like
10	interrupting her answers, please.	10	if it were something if it were
11	BY MR. TISI:	11	full of cinnamon and someone came
12	Q. Would you tell a family	12	to me and said, can I dust with
13	member that it's okay to dust with	13	cinnamon? I mean, why would you
14	asbestos?	14	want to dust with cinnamon. I
15	A. Yeah, again, this is a	15	I mean, that's a weird question to
16	hypothetical.	16	me.
17	Q. Absolutely.	17	BY MR. TISI:
18	A. I mean, you know, I I	18	Q. And so the question why
19	wouldn't say I I wouldn't say one	19	would you want to dust with asbestos,
20	way or the other. I would have to look	20	right?
21	at the literature and see sort of whether	21	A. Well, I you know, I'm not
22	or not that that would be I don't know	22	seeing a purpose for doing it.
23	asbestos. And so that's why I'm having a	23	Q. I'm asking you from a
24	hard time answering this question.	24	safety from a safety perspective.
	Page 139		Page 141
1	Q. Okay. So just the record is	1	Let's assume there was a purpose I'm
2	clear, if I had a bottle of asbestos and	2	going to add to my hypothetical.
3	you were advising a family member and a	3	Let's assume there was a
4	family member came to you and said,	4	purpose to do it, and somebody came up to
5	"Dr. Ballman, do you think it's okay if I	5	you and said, "I think it's I think
6	dust with asbestos," you wouldn't know	6	I'd like to dust with asbestos."
7	what answer to give? You'd say I have to	7	Would you say that that
8	take out the literature and look at it?	8	would be okay?
9	MS. MILLER: Objection.	9	MS. MILLER: Objection.
10	Maybe you don't need to have	10	THE WITNESS: I just can't
11	those facial expression.	11	imagine that situation.
12	THE WITNESS: I mean, that's	12	BY MR. TISI:
13	a real hypothetical, because I	13	Q. Okay.
14	couldn't imagine anyone coming to	14	A. So it's very I can't
15	me and saying can they dust with	15	answer that.
16	asbestos. So that's why I'm	16	Q. I'm asking bear with me
17	having a hard time answering this	17	in the hypothetical. We're allowed to do
18	question. I just don't see any	18	that in a deposition.
19	any what would be the purpose	19	If if if there were a
20	of dusting with asbestos? What	20	reason and somebody came up to you and
21	would be the I just don't	21	asked you for advice. Would you say to
22	BY MR. TISI:	22	them, sure, dust with asbestos?
23	Q. Honestly I can't imagine	23	MS. MILLER: Objection.
24	either. So let me ask you the question.	24	THE WITNESS: So, what I

36 (Pages 138 to 141)

	Page 142		Page 144
1	feel comfortable in saying, and	1	A. Unless new information comes
2	this is what I addressed, is if	2	to light.
3	that cup were full of talcum	3	Q. Okay. Does it fully
4	powder and someone really would	4	describe the methodology that you use to
5	have asked my opinion as to	5	reach your opinions?
6	whether or not they should use it,	6	A. I I don't know what you
7	I would just say it's my	7	mean by fully. But I do explain the
8	professional opinion that, you	8	methodology that I used and and
9	know, whatever is in there, you	9	provide bases for why I come to
10	know, that's no causal	10	conclusions.
11	relationship between dusting on	11	Q. Did you grade the evidence
12	the perineum and ovarian cancer.	12	giving numerical values? Did you say,
13	BY MR. TISI:	13	well, this is a four on a scale of five,
14	Q. Okay. And that would	14	this is a two on a scale of five, you
15	include, whatever in there, if there is	15	didn't do that, right?
16	asbestos in there?	16	A. Grade what evidence?
17	A. Well, whatever talcum	17	Q. Any of the evidence you
18	powder, that's the literature I looked	18	used. Did you provide in weighing the
19	at, whatever that talcum powder is	19	evidence, did you grade them?
20	composed of, there is no evidence that	20	MS. MILLER: Objection.
21	it credible evidence that it causes	21	BY MR. TISI:
22	ovarian cancer.	22	Q. Did you provide any
23	Q. Let me switch topics again.	23	numerical values?
24	Go to Exhibit Number 1,	24	A. I'm I'm confused by the
	Page 143		Page 145
1	which is the report you were going to	1	question. I mean, when one does
2	you gave.	2	research, it's not common to grade every
3	A. Yes, I'm there.	3	piece of data that's on hand in any
4	Q. Okay. Front page says	4	any way. So I'm not sure. So I I
5	I'm sorry, let me let me just you	5	think I don't understand your question.
6	signed that page, correct?	6	Q. Thank you. I appreciate
7	A. Yes.	7	that.
8	Q. Was every talc-specific	8	Now, we discussed this
9	opinion contained in this report reached	9	before, but you employed what are called
10	after meeting with the J&J lawyers?	10	the Bradford Hill analysis, correct?
11	MS. MILLER: Objection.	11	A. Something along those terms.
12	This has been addressed already	12	Q. Okay.
13	before.	13	MR. TISI: And for the
14	BY MR. TISI:	14	record, I want to attach as
15	Q. Yeah, okay.	15	Exhibit Number 6 Dr. Hill's
16	A. This this entire report	16	article.
17	and all the research done for this report	17	(Document marked for
18	was done after I started working on	18	identification as Exhibit
19	this well, I did it as part of	19	Ballman-6.)
20	generating this report which happened	20	BY MR. TISI:
21	after November 2018.	21	Q. Is this the article, 1965
22	Q. Does the report give all the	22	article that you were referring to in
l l			
23 24	opinions you're prepared to give in this case?	23 24	your report? A. Yes.

37 (Pages 142 to 145)

	Page 146		Page 148
1	Q. Thank you.	1	keep piling question objection.
2	Is this a is it fair to	2	I'd like to say something.
3	say that in the field of epidemiology, as	3	You keep piling question
4	you understand it, this is a seminal	4	upon question upon question so
5	seminal analysis of how to do a causation	5	MR. TISI: Objection is
6	analysis?	6	MS. MILLER: Okay.
7	A. I would say it it	7	MR. TISI: Objection is
8	provides the framework for how	8	fine, Counsel.
9	epidemiologists go about in determining	9	MS. MILLER: And I think
10	whether there is a causal relationship.	10	it it's impossible for her to
11	Q. And while there are a lot of	11	know which question to answer. I
12	published articles out there, you would	12	don't think it's fair.
13	consider this to be a fairly important	13	MR. TISI: How about the
14	piece of this would be, you know, kind	14	last one?
15	of a different category in terms of its	15	Well, when she looks at
16	impact on how we look at causation	16	me
17	questions?	17	THE WITNESS: Can you repeat
18	A. Again, I think I I would	18	the last one, please?
19	say it sort of frames today how how	19	MR. TISI: Yes.
20	people evaluate causation questions.	20	MS. MILLER: Can you just
21	It's it's the first basis of it.	21	try to ask one question at a time.
22	Q. When is prior to meeting	22	That's all I ask.
23	with the lawyers in this case, had you	23	BY MR. TISI:
24	ever seen the Hill criteria had you	24	Q. Is is there is there
	Page 147		Page 149
1	ever seen the Hill article?	1	any
2	A. Yes.	2	MS. MILLER: I'll object
3	Q. Okay. And is the Hill	3	less that way.
4	criteria applied any differently	4	BY MR. TISI:
5	depending upon where you live?	5	Q. Is there any difference
6	In other words, do do	6	between how scientists approach a
7	people in France apply the Hill criteria	7	causation question depending upon where
8	the same way they apply it in the United	8	they happen to live and practice?
9	States?	9	A. I believe that
10	MS. MILLER: Objection.	10	epidemiologists apply this criteria. I
11	BY MR. TISI:	11	have no evidence that it would be
12	Q. People in England apply it	12	dependent upon geographic location of
13	the same way they apply it in Canada?	13	of the epidemiologist.
14	MS. MILLER: Is that is	14	Q. Okay. And so for example,
15	that	15	we use the issue, we we looked at the
16	BY MR. TISI:	16	Health Canada report before. You have no
17	Q. I'm I'm asking you	17	reason to believe that they apply the
18	geographically. Is there if anyone	18	the Bradford Hill criteria different in
19	were to stand up in court and say well,	19	Canada than they do in the United States?
20	you know, this is an English scientist	20	A. I I think any good
21	and, therefore, they apply it differently	21	epidemiologist would would apply
22	in England than they apply it in the	22	scientifically based methods to to
23	United States.	23	come up with their conclusions.
24	MS. MILLER: I think you	24	Q. Okay. And certainly the

38 (Pages 146 to 149)

	Page 150		Page 152
1	Hill framework is a scientifically based	1	expert witness? Have you told anybody
2	framework for looking at causation?	2	that?
3	A. It provides a framework in	3	MS. MILLER: Objection.
4	which people can look at at the issue	4	THE WITNESS: Have I told
5	of causation.	5	someone that it
6	Q. Okay. Did you write your	6	BY MR. TISI:
7	general causation report Exhibit 1?	7	Q. Have you ever told anybody,
8	A. I wrote everything in it	8	you know, being an expert witness I can
9	except for title. Except for the	9	make a little extra money, or words to
10	materials reviewed and considered piece.	10	that effect?
11	Q. Okay. And are all the words	11	MS. MILLER: Objection.
12	and sentences in the report yours?	12	THE WITNESS: Not that I
13	A. I I wrote the entire	13	recall.
14	report.	14	BY MR. TISI:
15	Q. Did the lawyers for J&J	15	Q. If you go to Page 21 of your
16	write any of the words and sentences	16	report actually, let me change it.
17	contained in your report?	17	You rely on the you look
18	A. I I wrote the entire	18	at the observational studies and
19	report.	19	evidence, correct?
20	Q. When did you actually start	20	A. I I I looked at
21	to write the report?	21	observational studies as part of my
22	A. From the beginning,	22	analyses.
23	essentially. Because as I was reviewing	23	Q. And in addition you looked
24	the literature, I I put sections into	24	at the biologic evidence and that's on
	Page 151		Page 153
1	a document that was the basis of my	1	Page 48 and 49 of your report?
2	report.	2	A. 48 and 49?
3	Q. When did you first start	3	Q. Mm-hmm. I'm sorry. I must
4	becoming an expert witness? I know you	4	have mistyped it. I apologize. Maybe
5	were involved in the Viagra case and I	5	it's 38 and 39.
6	When did you when did you	6	MS. MILLER: There's a table
7	first make yourself available as an	7	of contents.
8	expert witness in litigation?	8	BY MR. TISI:
9	MS. MILLER: Objection.	9	Q. Yeah, that may have it. On
10	THE WITNESS: I never made	10	Page 36.
11	myself available as an expert	11	A. Yes, I'm there.
12 13	witness. I was contacted first by	12	Q. And that contains your
14	Sidley Austin with respect to a	13 14	analysis of the non-epidemiologic evidence, correct?
15	patent case. But they contacted me. I didn't even know how that	15	A. I don't think I would call
16	came about.	16	it non-epidemiologic evidence. I mean,
17	BY MR. TISI:	17	biological plausibility is part of the
18	Q. Okay. And when would that	18	Bradford Hill criteria. And that's what
19	have been?	19	epidemiologists use to
20	A. You are stretching my memory	20	Q. Okay. Now, going back to
21	now. 2016.	21	your conclusion, you say there was no
22	Q. Have you ever told anybody	22	evidence of a causal relationship between
23	that you think it would be a good way to	23	perineal and genital talcum powder
	•		
24	make additional money to be a to be an	24	exposure and ovarian cancer, correct?

39 (Pages 150 to 153)

	Page 154		Page 156
1	A. That's what I state.	1	BY MR. TISI:
2	Q. And that's those are your	2	Q. Well, I'm going to show you
3	words?	3	one. Do you know who Dr. Narod is?
4	A. Those are my words.	4	A. Not personally.
5	Q. And isn't it true that	5	Q. Do you know him
6	outside of litigation now, this is a	6	professionally by reputation?
7	litigation report. This was paid for by	7	A. I know that I read an
8	Johnson & Johnson for the work that you	8	article that he had published.
9	did, correct?	9	Q. Okay. And this article is
10	MS. MILLER: Objection.	10	in Gynecologic Oncology. It's in your
11	There's two questions.	11	report.
12	BY MR. TISI:	12	A. Yes. It's published in
13	Q. The report the generation	13	Gynecologic Oncology.
14	of this report was paid for by Johnson &	14	Q. And it's an article entitled
15	Johnson?	15	"Talc and Ovarian Cancer"?
16	MS. MILLER: Objection.	16	A. Yes.
17	THE WITNESS: I did this	17	Q. And it's an is this a
18	report as part of my expert	18	respected peer-reviewed journal?
19	witness activities on the behalf	19	A. I don't know what the impact
20	of Johnson & Johnson.	20	factor is of this journal. It is a
21	BY MR. TISI:	21	peer-reviewed journal.
22	Q. For which you are paid?	22	Q. Does impact factor always
23	A. For which I am paid.	23	reflect the quality of the journal, the
24	Q. Okay. And isn't it true	24	actual academic quality of the journal?
	Page 155		Page 157
1		1	
2	that experts outside of litigation have published the opinion that you expressed	2	A. It depends upon who you talk to. So journals that have high impact
3	here as disingenuous?	3	factors tend to think it does. Probably
4	A. Can you show me?	4	more than journals with low impact
5	· ·	5	factor. But in general, I think the
6	Q. I'm going to. Have you ever have you ever seen a description	6	higher the impact factor there is a
7		7	correlation with the quality of the
8	of of that opinion as being disingenuous?	8	journal.
9	MS. MILLER: Objection.	9	Q. Have you published in
10	BY MR. TISI:	10	relatively low impact journals?
11	Q. In the published literature?	11	A. I have.
12	A. Not to my knowledge. Can I	12	Q. So you don't have a
13	see	13	criticism of anybody who publishes in
14	Q. Sure.	14	a in a low impact journal, do you?
15	A what you're referring	15	A. I don't know. That's a
16	to what you're referring to?	16	broad question.
17	Q. Do you know of a do you	17	Q. Well we had some testimony
18	know of a publication by a Steven Narod,	18	the other day from a witness who said,
19	M.D.?	19	"Well, only if it's a high impact"
20	A. Which publication? I'm sure	20	paraphrasing, and I am paraphrasing, that
21	he has many.	21	low impact journals are not as
22	(Document marked for	22	significant as high impact journals in
23	identification as Exhibit	23	terms of their scholarly scholarly
24	Ballman-7.)	24	importance.
Z ±	Danman-1.)	4	importance.

40 (Pages 154 to 157)

	Page 158		Page 160
1	MS. MILLER: Objection.	1	exactly where you're reading?
2	THE WITNESS: That's just	2	Q. Sure. I'll show you mine.
3	really broad. I mean, I think my	3	A. Oh, there, thank you. Thank
4	take on it is that high impact	4	you.
5	journals have definitely probably	5	MS. SHARKO: Can I see it?
6	more of a rigorous peer review	6	MR. TISI: You have it right
7	process than do some lower impact	7	there.
8	journals. But that that is not	8	MS. SHARKO: Thank you.
9	an absolute.	9	BY MR. TISI:
10	BY MR. TISI:	10	Q. It is unlikely that the
11	Q. Because you publish	11	association between talc and ovarian
12	A. But I'm sure there's	12	cancer is due to confounding, and so it
13	Q. Because you publish in	13	is fair to say that if there's a
14	A exceptions.	14	statistically a statistically robust
15	Q low impact journals,	15	relationship between talc and ovarian
16	right?	16	cancer, it is likely to be causal, albeit
17	MS. MILLER: Objection.	17	with intermediate factors, such as
18	Please stop interrupting	18	inflammation. In any case, given the
19	her.	19	number of hazard ratios in the literature
20	BY MR. TISI:	20	between 1.1 and 1.4 in both case-control
21	Q. You publish in low impact	21	and cohort studies, it's disingenuous to
22	journals, correct?	22	state there is no evidence that talc is
23	A. I have. I don't I'm sure	23	associated with ovarian cancer.
24	there are some of the publications on my	24	Do you see that?
	Page 159		Page 161
1	list that are in lower impact journals	1	A. I do see that. You did read
2	than others.	2	that correctly.
3	Q. Okay. Now, if I go to the	3	Q. Okay. I'm going to have
4	Narod article which is on your reference	4	that statement of Dr. Narod
5	list or on one of the lists. I forget	5	MS. MILLER: I was just
6	which one it is.	6	going to say you left one word out
7	On the bottom of the	7	in your reading
8	left-hand column, on the bottom, it	8	MS. SHARKO: I think he
9	says I'm reading	9	says
10	MS. MILLER: What page are	10	THE WITNESS: Oh, you didn't
11	you on?	11	read that correct.
12	BY MR. TISI:	12	MR. TISI: I thought you
13	Q. From about	13	said you did read did I
14	MR. TISI: The second page.	14	THE WITNESS: I'm sorry.
15	BY MR. TISI:	15	BY MR. TISI:
16	Q. Left-hand column, about	16	Q. I'll read it again. Let me
17	60 percent of the way down.	17	put it in front of you.
18	Okay. It says the	18	(Document marked for
19	following: And I'm going to read it, and	19	identification as Exhibit
20	you tell me whether I read it correctly.	20	Ballman-8.)
21	It is unlikely that the	21	BY MR. TISI:
22	association between talc and ovarian	22	Q. This is Exhibit Number 8.
23	cancer	23	And I've highlighted
24	A. Wait, wait. Can I find	24	MS. MILLER: Again, this is

41 (Pages 158 to 161)

	Page 162		Page 164
1	called a conclusion but it comes	1	the the statement will be the
2	in the middle of the document. I	2	record will be
3	have	3	A. Yeah.
4	MR. LOCKE: This is	4	Q from the article.
5	definitely I'm going to object.	5	Do you see where it says,
6	This is definitely not the	6	"It's disingenuous to state that there is
7	conclusion. Read the last	7	no evidence that talc is associated with
8	paragraph.	8	ovarian cancer"?
9	MS. MILLER: I have an	9	A. Talc is
10	objection to the mislabeling of so	10	MR. TISI: Counsel, please.
11	far each of these exhibits.	11	MS. MILLER: I
12	MR. TISI: Let me tell you	12	THE WITNESS: "It is
13	what. I'm going to take out	13	disingenuous to state that there
14	you can block out the conclusion	14	is no evidence that talc is
15	if you want, if that will make you	15	associated with ovarian cancer."
16	· · · · · · · · · · · · · · · · · · ·	16	BY MR. TISI:
17	happy, Counsel.	17	Q. That's what he writes in his
18	MS. MILLER: Thank you for that offer.	18	
19		19	non-litigation report, do you see it? A. I I do see that.
20	MR. TISI: Okay. So you won't do it.	20	
21	BY MR. TISI:	21	Q. Okay. And you would
22		22	disagree with that statement, correct?
23	Q. So, I'm Doctor, did I	23	A. Well, I mean, it depends
24	read the statement correctly, that it is	24	upon how you parse things out. So you
24	unlikely that the association between	24	know, it's disingenuous to state that
	Page 163		Page 165
1	talc and ovarian cancer is due to	1	there is no evidence that talc is
2	confounding, and so it is fair to say	2	associated with ovarian cancer. So if
3	that if there's a statistically robust	3	you mean that there are no studies that
4	relationship between talc and ovarian	4	have a statistically significant
5	cancer is likely to be causal, albeit	5	association, that would be correct.
6	with intermediate factors such as	6	Q. Okay.
7	inflammation.	7	A. He is not stating there that
8	Did I read that correctly?	8	there is no evidence that talc is that
9	MS. SHARKO: No, you didn't.	9	talc is that there's a causal
10	Is the word use missing here	10	relationship between talc and ovarian
11	too? He misread that.	11	cancer.
12	MS. MILLER: That word "use"	12	Q. What he also says that
13	is missing again.	13	there that the association between
14	MR. TISI: "Talc use and	14	talc and ovarian cancer is unlikely due
15	ovarian cancer is likely to be	15	to confounding, do you see that in the
16	causal."	16	first sentence?
17	Did I not say that?	17	A. Yes.
18	MS. MILLER: "Talc use".	18	Q. And you disagree with that,
19	BY MR. TISI:	19	true?
20	Q. Do you see that statement?	20	A. Now, which sentence, can you
21	A. Yeah, I see that statement.	21	read
22	And I'll take your word you read it	22	Q. The first sentence. "It is
23	correctly.	23	unlikely that the association between
24	Q. The statement will be what	24	talc and ovarian cancer"

42 (Pages 162 to 165)

	Page 166		Page 168
1	A. Oh, that one.	1	his conclusion wrong?
2	Q "is due to confounding."	2	A. I I would have to see the
3	Do you disagree with that?	3	references upon which he's making that
4	MR. LOCKE: Objection to the	4	conclusion in order to assess that.
5	term, "the first sentence."	5	The data I looked at in
6	THE WITNESS: Yeah.	6	totality, I do see evidence of
7	MR. TISI: The first	7	confounding. In fact, we can go to the
8	okay.	8	Schildkraut study, and and there is a
9	THE WITNESS: It's of that	9	pretty resounding evidence there that
10	document.	10	there is recall bias, which is
11	BY MR. TISI:	11	Q. After 2014, correct?
12	Q. Correct. Of of exhibit	12	A. Well, there's recall bias
13	that	13	no, there's recall bias even before that.
14	A. This one.	14	But it shows sort of how
15	Q. Correct.	15	much magnitude recall bias can have just
16	A. 8?	16	due to tweaking one little thing.
17	Q. Yes.	17	But I did not say that
18	A. I I don't see any	18	there's no recall bias before 2014.
19	references there's references to	19	Q. So would you defer to the
20	support that statement.	20	authors of that study as to what the
21	Q. So you would disagree with	21	meaning of that data meant?
22	the statement?	22	A. No. Scientists don't do
23	A. Well, I I don't see any	23	that. Scientists look at publications.
24	references to support that.	24	They look at they looked at the
	Page 167		Page 169
1	Q. So you disagree with the	1	methods. The methods of to be published.
2	statement?	2	They look at the analyses that were done
3	MS. MILLER: Objection.	3	and the results that were done. And
4	THE WITNESS: I'm just	4	and they evaluate whether or not they
5	saying I don't see any	5	they believe to the strength that the
6	references	6	authors do, that the authors' conclusions
7	BY MR. TISI:	7	are supported by all that.
8	Q. I understand. I'm not	8	Q. Now, Dr. Narod published his
9	asking you whether you see references.	9	opinions, correct?
10	I'm asking you whether you disagree with	10	A. Are these opinions? Yeah?
11	the statement.	11	Q. Okay. I'm going to I'll
12	A. I believe in any sort of	12	characterize them as opinion. Okay.
13	observational study it is not possible to	13	He published these
14	conclude that there is no confounding.	14	statements, correct?
15	Q. Okay. That's not what he	15	A. Yes. This is statements
16	said, did he?	16	made in a paper that was published.
17	He said, "It is unlikely	17	Q. Okay. And so he submitted
18	that the association between talc and	18	his his views to the scientific and
19	ovarian cancer is due to confounding."	19	medical community, correct?
20	Do you see that?	20	A. Yeah. I mean, the all
21	A. I see he says unlikely. But	21	the views that's in this entire article,
22	again, I there's there's no	22	I mean, so, you know, there's more words
23	references to support that.	23	than this than just the the two
24	Q. Okay. So my question is, is	24	sentences that were pulled out.

43 (Pages 166 to 169)

	Page 170		Page 172
1	Q. I agree, I agree. But he	1	Canada did, just like any of the other
2	submitted his his views to the	2	authors of the studies that you've
3	scientific and medical community for what	3	reviewed, what your views on the level of
4	that's worth, correct?	4	evidence there is for the general
5	A. This paper has been	5	causation question.
6	published.	6	Are you do you intend to
7	Q. Okay. The Health Canada	7	publish?
8	paper, even in its draft form, was put on	8	MS. MILLER: Objection.
9	the internet. That's where you found it,	9	Again, that was two questions.
10	correct?	10	The first one was the
11	A. The Health Canada draft is	11	objectionable one.
12	available for people to review.	12	THE WITNESS: So
13	Q. Okay. And comment on, which	13	MR. TISI: Let me rephrase
14	you have not done, right?	14	the question.
15	A. I have not commented on the	15	BY MR. TISI:
16	Health Canada.	16	Q. Do you intend to publish on
17	Q. Have you published your	17	the question about whether or not ovarian
18	opinions about tale?	18	cancer is caused by talcum powder
19	A. I did research on this. And	19	products?
20	I wrote an expert report. I have not	20	A. I do not plan to publish.
21	published my expert report.	21	Q. Now, in addition to offering
22	Q. Have you submitted your	22	your own professional opinion on the
23	report to peer review?	23	sufficiency of the evidence on talc and
24	A. That's sort of that would	24	ovarian cancer, I understand you may
	Page 171		Page 173
1	be sort of odd. This this expert	1	offer criticisms of plaintiffs'
2	report is written for a specific purpose.	2	epidemiology experts in this case; is
3	If I'm going to do a peer-reviewed	3	that true?
4	article, it it would look a little	4	A. So, in my report, I point
5	different from from this expert	5	out some I point out things that
6	report.	6	other experts had said that that I
7	Q. So what specific purpose was	7	believe have limitations or that I don't
8	this article was this report written	8	agree with.
9	for?	9	Q. Well, for the record the
10	MS. MILLER: Objection.	10	experts that you referred to in your
11	THE WITNESS: So this report	11	report are Jack Siemiatycki?
12	was written to look at the	12	A. He's one expert.
13	totality of the evidence that's	13	Q. Do you know who Jack
14	been published to determine	14	Siemiatycki is?
15	whether there is an association	15	A. I know who I know who he
16	between talc and ovarian cancer, a	16	is. But I've not met him.
17	causal relationship between talc	17	Q. You understand that he's
18	and ovarian cancer.	18	well published in the field of cancer
19	BY MR. TISI:	19	epidemiology?
20	Q. Now, did you so would	20	MS. MILLER: Objection.
21	you have you decided now that	21	THE WITNESS: I did not look
22	you've done this review, are you going to	22	at his publication records. So I
23	write a paper that would put out, just	23	don't know if he's well published
24	like Dr. Narod did, just like Health	24	or not.

44 (Pages 170 to 173)

	Page 174		Page 176
1 1	BY MR. TISI:	1	epidemiologist and has I can't
2	Q. You know that he was the	2	remember if she's published in the area.
	chair of the IARC panel that dealt with	3	I presume she has. And, you know, one
	the issue of ovarian cancer and talc?	4	can look at her publications.
5	A. I believe when I read the	5	Q. So I guess what I'm
	IARC I believe when I read his expert	6	hearing so let
	report, that is what he stated.	7	THE VIDEOGRAPHER: Sorry.
8	Q. Do you have any reason to	8	You're covering your microphone.
	believe that he's unqualified to offer	9	BY MR. TISI:
	his opinions in this case on the general	10	Q. Let me summarize it. Do
	question? Whether you disagree with his	11	you of any of plaintiffs' experts in
	conclusions, put that aside for a moment.	12	this case, do you intend to offer any
13	I'm asking you do you have	13	opinions that any of them are unqualified
	any qualms with his qualifications to	14	to render an opinion on the general
	offer an opinion on the issue of general	15	causation question?
	causation?	16	MS. MILLER: Objection.
17	MS. MILLER: Objection.	17	THE WITNESS: I it's I
18	THE WITNESS: I don't think	18	don't I was not asked to render
19	it's my place to decide whether or	19	an opinion if I think that any of
20	not someone has the qualifications	20	the experts are unqualified or
21	to offer an opinion.	21	not. And so I haven't seen
	BY MR. TISI:	22	thought about that.
23	Q. Well, we had a witness the	23	BY MR. TISI:
	other day who said that he thought	24	Q. And that's fine. Are all of
	Page 175		Page 177
1		1	
	another one of plaintiffs' witnesses was	1	your opinions of these experts contained
	unqualified. I'm asking you, are you	2	in your expert report, Exhibit 1?
	do you think that this witness that	3	MS. MILLER: Objection. She
	Dr. Siemiatycki is unqualified?	4	just said she has no opinions.
5	A. I believe he has he has	5	THE WITNESS: Are my
	credentials in this area, and he's	6	opinions of the actual experts?
	done he was, as you said, the chair of	7	BY MR. TISI:
	the IARC committee, and may even have	8	Q. Yes. Of the actual experts,
	published in this area.	9	of their conclusions, of their
10	So, you know, when people	10	methodology, are all of those opinions
	publish, yeah I don't know what the	11	contained in your expert report, Exhibit
	word "qualified" means, but I think, you	12	Number 1?
	know, he is a scientist.	13	MS. MILLER: Objection. I
14	Q. What about Anne McTiernan?	14	don't understand that question.
	Do you have any qualms about her	15	MR. TISI: You don't have
	qualifications to render an opinion on	16	to. As long as she understand it.
	the question of whether or not talc	17	THE WITNESS: Yeah, I'm
	causes ovarian cancer?	18	confused too.
19	MS. MILLER: Objection.	19	MS. MILLER: What?
20	THE WITNESS: I can't speak	20	THE WITNESS: Because I
21	to the qualifications.	21	thought I heard my opinions of the
	BY MR. TISI:	22	experts
23	Q. Okay.	23	BY MR. TISI:
24	A. I know that she's an	24	Q. I said

45 (Pages 174 to 177)

	Page 178		Page 180
1	A and I don't know why I	1	number here. I disagree with that number
2	would have	2	there, or I disagree so I guess I have
3	Q. Are your criticisms of	3	to say it's not complete.
4	your are all of the criticisms that	4	Q. Okay. Are there any
5	you have on plaintiffs' experts contained	5	opinions that you have as you sit here
6	in your expert report?	6	today about any of the opinions that they
7	MS. MILLER: Her criticisms	7	gave that are not in your report?
8	of the experts' opinions?	8	A. Without going through their
9	MR. TISI: Yes.	9	reports and going through my report to
10	MS. MILLER: Okay. That's	10	make sure that every single criticism I
11	not what you said.	11	might have has been made, I can't answer
12	THE WITNESS: No, no, you	12	that with any sort of certainty.
13	said experts. And so I'm still	13	Q. Okay. I'm going to have it
14	confused.	14	marked as Exhibit Number 9, your
15	BY MR. TISI:	15	curriculum vitae.
16	Q. Okay. Are all of the	16	(Document marked for
17	opinions related to plaintiffs' experts	17	identification as Exhibit
18	contained in your expert report?	18	Ballman-9.)
19	A. Are all my opinions related	19	BY MR. TISI:
20	to plaintiffs' experts?	20	Q. This is the one that was
21	Q. Mm-hmm.	21	provided with your expert report. Is
22	A. Themselves?	22	this your most recent curriculum vitae?
23	Q. Mm-hmm. Of their opinions,	23	A. No.
24	their methodology, any aspect	24	Q. Is there one subsequent to
	Page 179		Page 181
1	A. Okay. That's a little	1	that?
2	different. Again, I heard, are my	2	A. This says June 5th on it.
3	opinions of the qualifications, or	3	Q. Okay. Is the expert
4	whatever of the experts.	4	report
5	Q. I said I'm reading	5	MS. MILLER: She's looking.
6	verbatim. Are all of the opinions	6	THE WITNESS: The thing
7	related to plaintiffs' experts that you	7	that's attached as Exhibit A on my
8	have contained in your expert report?	8	expert report says February 22nd.
9	A. See, that says are my	9	BY MR. TISI:
10	opinions of all the plaintiff experts.	10	Q. Okay. So let's
11	To me, that's like my opinions on the	11	A. So
12	experts themselves, which I did not	12	Q. That's an old one. I have
13	address.	13	it says February 22nd there. Am I wrong?
14	Q. Okay. I said related to the	14	MS. MILLER: The one that
15	expert. Okay. Let me let me rephrase	15	you gave us says June 5th.
16	the question.	16	MR. TISI: Okay. My office
17	Are all of your criticisms	17	must have printed it out wrong.
18	about the opinions that plaintiffs'	18	BY MR. TISI:
19	experts will offer in this case contained	19	Q. Okay. So is Exhibit A to
20	in your report?	20	your expert report your most recent
21	A. I mean, the ones I thought	21	curriculum vitae?
22	were the most important are in here.	22	A. It's the most
23	I can you know, I didn't go through	23	MS. MILLER: Shall we just
24	and say, okay, I disagree with this	24	all refer back to Exhibit 1 for

46 (Pages 178 to 181)

	Page 182		Page 184
1	this portion of the questioning?	1	correct?
2	MR. TISI: Yes, correct.	2	A. Not off the top of my head.
3	Exhibit A.	3	Q. Okay. One more plaintiffs'
4	MS. MILLER: Of your	4	epidemiology referred to in your expert
5	Exhibit 1?	5	report is April Zambelli-Wiener-Weiner.
6	MR. TISI: Exhibit 1.	6	Do you remember? She looked at the
7	MS. MILLER: Exhibit A to	7	Huncharek and Muscat publications in 2003
8	Exhibit 1.	8	and 2000 2007, and then the 2011
9	MR. TISI: Correct.	9	publication of the of their report to
10	MS. MILLER: Just so we're	10	the FDA. Do you remember reading that?
11	all on the same page.	11	A. I remember reading her
12	MR. TISI: Thank you.	12	expert report. Can I can I see it? I
13	THE WITNESS: It's the	13	don't remember if those were the actual
14	latest one that I updated.	14	studies that she I thought 2003 was
15	BY MR. TISI:	15	and I don't remember a 2011. So
16	Q. Okay. Does this CV	16	Q. Okay. Let
17	accurately summarize the experience that	17	A but I did read her expert
18	you believe qualifies you to render an	18	report.
19	epidemiologic opinion on the causation	19	Q. Let's put aside 2011 for a
20	question in this case?	20	moment. The diaphragm study, which was
21	A. That that's a broad	21	2007 and 2003 meta-analysis, you did read
22	question. I mean, I don't know if you	22	her report on those, correct?
23	can capture 20 years of of experience,	23	A. I read her expert report.
24	you know, in one document, but it	24	Q. Okay. And you agree that
	Page 183		Page 185
1	captures, you know, some highlights, yes.	1	those reports contain those studies
2	Q. Well, is there anything that	2	contain errors, correct?
3	you can think of in your experience,	3	A. Yeah. Can I see her expert
4	beyond what is in your expert report as	4	report, please?
5	you sit here right now, that would	5	Q. I don't have it with me.
6	qualify you to testify on the issue of	6	Do you do you have any
7	whether or not ovarian cancer is caused	7	opinions as to whether did you look
8	by talcum powder products?	8	when you were preparing your report, did
9	A. Well, in the in the	9	you look at her report and try to confirm
10	addition to what is written here is my	10	or not the errors that she identified
11	day in and day out daily activities	11	with respect to those studies?
12	when that I do as part of my job.	12	MS. MILLER: Objection.
13	That that has built up the experience	13	BY MR. TISI:
14	over the years.	14	Q. Was that part of what you
15	Q. When is the last time do	15	were asked to do?
16	any of your publications anywhere refer	16	MS. MILLER: Objection. I
17	to the Bradford Hill criteria?	17	am sorry, objection after the
18	A. I have no idea. Nothing	18	first question. I didn't realize
19	comes to the top of my head, but I can't	19	there would be two.
20	say with certainty.	20	THE WITNESS: So
21	Q. Okay.	21	BY MR. TISI:
22	A. As you mentioned, there's	22	Q. Was it part of your in
23	like 200 some.	23	in connection with preparing your expert
<u> </u>			

47 (Pages 182 to 185)

	Page 186		Page 188
1	there were substantive flaws in the	1	of deposition
2	analyses conducted by Drs. Huncharek and	2	MS. MILLER: If you want
3	Muscat that Dr. Zambelli-Wiener-Weiner	3	Dr. Zambelli-Wiener-Weiner's
4	had identified?	4	report, we can have it brought in
5	A. So you're asking me to	5	here.
6	remember, just off the top of my head	6	MR. TISI: I don't need to.
7	what's in her report. I would very much	7	BY MR. TISI:
8	like to see that report	8	O. This is the notice of
9	Q. I'm asking you what you	9	deposition that we filed in this case.
10	I'm asking you what you did. Okay.	10	Have you seen that before?
11	Did you	11	A. I have seen this document.
12	A. I did look at her report and	12	Q. Okay. And you your
13	I did read through it.	13	counsel provided documents last night.
14	Q. Did you do any analysis of	14	And I'm not going to mark all of them.
15	the Huncharek and Muscat articles?	15	But because they will go out of order
16	A. Oh, did I that's a	16	here, I'm going to mark them as 10, A, B,
17	different question. Did I do any	17	C, D, because they are in response to
18	analyses of their articles? I read	18	this notice of deposition.
19	through her report. I do remember that.	19	A supplemental list of
20	I do remember her finding some error	20	materials, I'm going to have this marked
21	or what she called errors, numbers that	21	as Exhibit Number 10A.
22	she couldn't match that they had reported	22	(Document marked for
23	in their report that came from other	23	identification as Exhibit
24	case-control studies and so forth.	24	Ballman-10.)
	Page 187		Page 189
1	And I I remember her	1	(Document marked for
2	doing various different analyses that if	2	identification as Exhibit
3	they really used the studies that they	3	Ballman-10-A.)
4	claimed they used, what would the	4	BY MR. TISI:
5	dose-response relationship, say, look	5	Q. And this one, Number 2, is
6	like. And I remember it didn't matter,	6	the Health Canada document that we marked
7	because there still was no dose-response	7	previously.
8	relationship even when she did the	8	A. It has it on it here, yes.
9	analyses in the way she thought it should	9	Q. Okay.
10	have been done.	10	(Document marked for
11	Q. So other than that, do you	11	identification as Exhibit
12	have any criticisms of her?	12	Ballman-10-B.)
13	A. I would have to go through	13	(Document marked for
14	my my report here and and see if	14	identification as Exhibit
15	I I actually sort of mention anything	15	Ballman-10-C.)
16	with respect to her actual report. I	16	(Document marked for
17	don't remember off of the top of my head.	17	identification as Exhibit
18	Q. Now, Exhibit Number 10 is	18	Ballman-10-D.)
19	the I'm going to ask	19	BY MR. TISI:
20	(Document marked for	20	Q. The next is an addendum to
21	identification as Exhibit	21	list of materials reviewed and considered
22	Ballman-10.)	22	by Karla Ballman. And I'm going to have
23	BY MR. TISI:	23	this marked as Exhibit Number 10-B.
24	Q. I'm going to mark the notice	24	10-C is your invoice dated

48 (Pages 186 to 189)

	Page 190		Page 192
1	3/7/2019, the one that Ms. Sharko has not	1	exchange back and forth was to clarify
2	paid.	2	that you were?
3	MS. MILLER: It's Skadden.	3	MS. MILLER: Objection.
4	I think it's me who hasn't paid.	4	THE WITNESS: So can I see
5	MR. TISI: Okay.	5	the disclosure form?
6	MS. MILLER: I'm the bad guy	6	BY MR. TISI:
7	here.	7	Q. I don't I didn't print
8	BY MR. TISI:	8	it came too late last night for me to
9	Q. Next one is an e-mail I'm	9	print at the hotel.
10	going to ask you in a moment about, from	10	But you
11	Dr. Karla Ballman to Sandra Oquendo at	11	MS. MILLER: You printed the
12	the FDA.	12	e-mail but you didn't print the
13	Can you tell me what that's	13	disclosure it related to?
14	about?	14	MR. TISI: Excuse me,
15	MS. MILLER: Is that a	15	Counsel. I did not.
16	question now?	16	MS. MILLER: Okay. I
17	MR. TISI: Yes.	17	MR. TISI: Okay. If you
18	MS. MILLER: Are you done	18	have a copy, you can feel free to
19	marking them?	19	show it to her.
20	MR. TISI: No, I'm not done	20	MS. MILLER: Can I get a
21	marking them. I'm just going to	21	copy?
22	stop right there.	22	MR. TISI: But but
23	MS. MILLER: Oh, okay.	23	well, we'll go off the record and
24	BY MR. TISI:	24	you can get a copy.
	Page 191		Page 193
1	Q. That's an e-mail that you	1	MS. MILLER: Okay. Let's go
2	drafted on March 21, 2019, which would	2	off the record and I'll get a
3	have been I don't know what today's	3	copy.
4	date is. That may have been yesterday.	4	THE VIDEOGRAPHER: Remove
5	A. Yeah, I've been getting my	5	your microphones. The time is
6	dates mixed up this week.	6	11:33 a.m. Off the record.
7	Q. This is an e-mail disclosing	7	(Short break.)
8	to the FDA that you are an expert for	8	THE VIDEOGRAPHER: Okay. We
9	Johnson & Johnson in the talc litigation?	9	are back on the record. The time
10	A. So the first e-mail I is	10	is 11:48 a.m.
11	sending an updated disclosure form to the	11	BY MR. TISI:
12	FDA.	12	Q. Doctor, we took a quick
13	Q. Right.	13	break so that you could look at some
14	A. The second e-mail is a	14	documents. Could you tell us why you
15	response from them asking for	15	amended your FDA form yesterday to
16	clarification or answers to some specific	16	indicate that you had done some
17	questions.	17	consulting on the talc litigation with
18	And then the last e-mail is	18	J&J?
19	my saying here are my responses.	19	A. So this is for an FDA panel
20	Q. Okay. But but is it fair	20	and they wanted a disclosure. And so the
21	to say that you initially provided a	21	first time that I submitted my disclosure
22	disclosure form to for the FDA that	22	I believe it was January 23rd. I listed
23	did not disclose you were an expert for	23	Johnson & Johnson and \$12,000. So I
ر <u>ت</u> ا			

49 (Pages 190 to 193)

	Page 194		Page 196		
1	witness, last 12 months." I saw last	1	ongoing work that I'm doing, Johnson &		
2	12 months. "I appeared for or against	2	Johnson talc powder litigation that's		
3	the following listed firms/issues."	3	the issue and the amount that I		
4	And then I saw amount	4	billed.		
5	received.	5	Q. And now I notice that these		
6	So when I saw that, I was	6	do not contain it's supposed to go		
7	like okay, what they want is in the last	7	back 12 months?		
8	12 months any money I got from that I	8	A. Yes.		
9	actually physically got in the last	9	Q. They did not contain the		
10	12 months from doing expert work. And so	10	Viagra work that you've done?		
11	this was the amount that I had received	11	A. There was another		
12	in the last 12 months.	12	confidential document that accompanied		
13	So as part of the, what is	13	this, that I believe the decision was		
14	this notice called? As part of	14	made I don't know what the legal terms		
15	document Exhibit 10, the request was	15	are. And there was a list of all the		
16	for all disclosures made to the FDA, so I	16	companies that they wanted just that		
17	was looking through and trying to find	17	information on, if I had any sort of		
18	all disclosures. And I I am learning	18	engagement with the companies on that		
19	through my experience here that I need to	19	list.		
20	understand and look at words much more	20	Q. Who is they? The FDA?		
21	carefully. And so I re-read this again.	21	A. The FDA. There was another		
22	And then I saw and I am	22	document that accompanied this that		
23	sure I read it the first time. But it	23	explains sort of, you know, the		
24	just didn't register to me. It says "or	24	confidentiality disclosure. It says		
	Page 195		Page 197		
,		_			
1	under negotiation."	1	confidential on top. And that's why it		
2	And so I started thinking	2	wasn't shared.		
3	about that, and I thought, well, you	3	And Johnson & Johnson was		
4	know, they probably don't really mean	4	the only firm that I've done any work		
5	just under negotiation, that probably	5	with that was on that list.		
6	encompasses ongoing work.	6	Q. Okay. And so you didn't		
7	So I felt it was prudent to	7	feel that you needed to indicate that you		
8	amend my disclosure to the FDA to let	8	were an expert witness for the		
9	them know about the ongoing work for	9	manufacturers in Viagra/Cialis, based		
10	which I had not received any money in the	10	upon Number F Letter F on this form,		
11	last 12 months. And that is the document	11	that says, "Expert witness last 12 months		
12	that is is dated incorrectly. I sent	12	or negotiation, I appeared for or against		
13	the document on the 20th. 3/21/2019. I	13	the following firms/issues."		
14	had my dates mixed up.	14	MR. LOCKE: Objection to		
15	In there I went through and	15	form.		
16	another thing I had missed is it said	16	THE WITNESS: Yes,		
17	firm/issue. So I I thought, well, I	17	because		
18	better also put the issue I I	18	BY MR. TISI:		
19	missed that too the first time.	19	Q. It doesn't it doesn't		
20	So you now see it says,	20	limit to it on the attached list. It		
21	"Johnson & Johnson/Zytiga patent	21	simply says		
22	(prostate cancer)," the amount received.	22	A. No, but in the confidential		
23	That did not change.	23	document that wasn't, it said, "Please		
24	And then I added this	24	disclose any" "Please disclose for the		

50 (Pages 194 to 197)

	ige 198	Page 200
1 firms listed on this list."	1	is a different two different things,
2 MS. MILLER: There's a cov		correct?
3 memo. I can explain. There's a	3	A. Now I'm confused. I mean
4 cover memo. And it said do not		Q. Okay. Let me because I
5 disclose. Because it said do not	5	don't want to get I don't want to get
6 disclose and it wasn't the actual	6	bogged down.
7 conflicts, we did not produce it.	7	Would you agree with me that
8 BY MR. TISI:	8	these three these courses that you
9 Q. Okay. But can we agree the		taught deal primarily with trial design,
10 form doesn't the form itself the	10	statistical methods or biostatistics
disclosure form doesn't limit I mea		review?
12 I can't test this your because I	12	MS. MILLER: Objection.
13 can't see the document.	13	BY MR. TISI:
But what I'm asking you is,	14	Q. We can argue about whether
the form itself that's filed doesn't list	15	it's epidemiology or not later. Would
16 Viagra/Cialis litigation, does it?	16	you agree that that is the focus?
17 A. I mean, as you see on the	17	MS. MILLER: Objection.
18 form there, it is not listed, because	18	Really try to stick to one
, ,		question. I'm really pleading
again, in the cover letter that went wi this, the confidential cover letter that		1
,		with you.
3 7 2 2	· I	MR. TISI: She's looking at
J. S.	was 22 23	me like I've lost my mind.
		THE WITNESS: Well, no,
Q. Okay. Let me ask you I'n		because, I mean I mean I
	ige 199	Page 201
1 going to mark this as 10-E.	1	mean, clinical trials is
2 (Document marked for	2	epidemiology. It's study design.
3 identification as Exhibit	3	Biomarker development, that had
4 Ballman-10-E.)	4	epidemiology in it because it's
5 BY MR. TISI:	5	very dependent upon study design
6 Q. This is the lectures and	6	and what you can say and what you
7 workshops on epidemiology. And yo	u wrote 7	can't say.
8 epidemiology biostatistics. Is it fair	8	The trial the value of
9 to say that all of these all of these	9	trials, we were talking about
10 have to do with trial designs,	10	meta-analyses. So that that,
11 statistical methods, or biostatistics?	11	that lecture involved
12 A. So you would say that	12	meta-analyses and what a
13 meta-analyses is not epidemiology?	You 13	meta-analysis is so forth. As you
14 would say trial design is most	14	see in most you know, this
15 epidemiology? I think most	15	litigation involves many
16 epidemiologists would disagree with	that. 16	meta-analyses, and we're calling
Q. I'm asking you there's a	17	it epidemiology.
difference between trial design and tr	ial 18	BY MR. TISI:
19 analysis and causation analysis, is the		Q. I didn't ask you whether
20 not?	20	I simply asked you and, you know,
21 MS. MILLER: Objection.	21	forgive me if I think you're being
22 BY MR. TISI:	22	defensive here.
Q. I mean, doing a study and	23	MS. MILLER: Objection.
	ire 24	BY MR. TISI:

51 (Pages 198 to 201)

	Page 202		Page 204
		_	
1	Q. Okay. Okay. Because I've	1	A. Just, just a very vague.
2	simply asked are these primarily focused	2	Q. What is your understanding?
3	on trial design, statistical methods, and	3	MS. MILLER: Objection.
4	biostatistics review.	4	That's a legal question. I don't
5	MS. MILLER: Objection.	5	think that's a question for an
6	THE WITNESS: I don't know	6	expert. That's a question for a
7	how to answer that because, I	7	lawyer.
8	mean, that's what the titles say.	8	BY MR. TISI:
9	BY MR. TISI:	9	Q. What is your
10	Q. Thank you.	10	MR. TISI: I understand.
11	A. But it does not say sort of	11	BY MR. TISI:
12	what the content is of	12	Q. What is your understanding?
13	Q. I'm going to ask you that	13	MS. MILLER: She's not an
14	question. You really need to you	14	expert on the law
15	really need to answer my question, and	15	MR. TISI: I'm asking her
16	then I will ask the follow-up questions.	16	what her understanding is.
17	So are these the next	17	THE WITNESS: I
18	question that I'm going to ask, do any of	18	MS. MILLER: I understand,
19	these in any of these courses or	19	but I don't think that's an
20	lectures, did you teach students how to	20	appropriate question.
21	do a Bradford Hill analysis?	21	MR. TISI: Okay. Fine.
22	MS. MILLER: Objection. Is	22	THE WITNESS: Yeah, I don't
23	this about courses? I thought it	23	even know if I I even want to
24	was just lectures.	24	hazard what my understanding is,
	Page 203		Page 205
1	MR. TISI: Lectures. In any	1	because that's outside the scope
2	of these lectures.	2	of my expertise.
3	MS. MILLER: You said	3	And I I've been learning,
4	courses.	4	as I have mentioned, I've been
5	THE WITNESS: I don't	5	learning through these processes
6	believe Bradford Hill was	6	that the words I use are very
7	mentioned in in these	7	important. And so I am just not
8	particular lectures, no.	8	even going to hazard.
9	BY MR. TISI:	9	BY MR. TISI:
10	Q. Okay. Okay. Now before we	10	Q. Whether you do you know
11	discuss any further, let me just go back	11	whether or not in these hearings the
12	and and ask you.	12	question is going to be whether or not
13	The front page of your	13	the witnesses are qualified?
14	report talks about general causation	14	MS. MILLER: Objection.
15	Daubert hearings, the page that you	15	BY MR. TISI:
16	signed, correct, on Exhibit 1?	16	Q. Do you have any
17	A. That's what it says.	17	understanding of that?
18	Q. Okay. And has has it	18	MS. MILLER: Objection.
19	been explained to you or do you have any	19	Again, that was two questions. I
20	understanding let me rephrase the	20	think it's really hard when you
21	question.	21	ask two questions. I'm sorry to
22	Do you have any	22	keep repeating this.
23	understanding as to what Daubert hearings	23	BY MR. TISI:
24	are?	24	Q. Do you have do you have

52 (Pages 202 to 205)

	Page 206		Page 208
1	any understanding as to one in the issues	1	THE WITNESS: I mean,
2	in the Daubert hearings is whether the	2	that that's a very vague
3	witness is qualified to give an opinion	3	question. So I I can say what
4	on which they are proffered to give an	4	I did. I looked at the totality
5	opinion on?	5	of the evidence using established
6	A. I I my understanding	6	epidemiology framework, and I came
7	is, is experts should be experts in in	7	to the conclusion that there is no
8	the area that they were retained for.	8	credible evidence
9	Q. And use a proper	9	BY MR. TISI:
10	methodology, correct?	10	Q. Okay.
11	A. Well, if they were experts,	11	A of a causal association
12	I would presume that that they use	12	between talc and
13	they are experts in their area so they	13	Q. I understand that you
14	know what to do.	14	MR. TISI: Again, she's not
15	Q. Do you have any	15	answering my question
16	MS. MILLER: Objection.	16	MS. MILLER: She still has
17	BY MR. TISI:	17	to
18	Q. And that so, you agree	18	MR. TISI: No, I understand,
19	with me that being qualified experts in	19	but she can't filibuster.
20	the field, that the plaintiffs' experts	20	BY MR. TISI:
21	as your have used a proper	21	Q. I'm I didn't ask you what
22	methodology, they all looked at Bradford	22	you did.
23	Hill, correct?	23	I'm asking you, did the
24	MS. MILLER: Objection.	24	experts when you read their reports on
	Page 207		Page 209
1	THE WITNESS: Yeah, that's	1	the plaintiffs' side, whether you agreed
2	starting to go beyond my my	2	or disagreed with their conclusions, did
3	understanding of law. I mean I	3	they use the same framework that you did?
4	know that the both sides have	4	MS. MILLER: Objection.
5	experts and they both sides'	5	THE WITNESS: I I can't
6	experts say what they're experts	6	say that.
7	in, are were retained on the	7	BY MR. TISI:
8	basis of what their expertise is,	8	Q. Okay.
9	but that that's basically all I	9	A. I mean, I I don't know
10	know.	10	Q. And that's fine then. Just
11	BY MR. TISI:	11	answer it that way.
12	Q. Do you have any reason to	12	A. Okay. Ĭ I can't say that
13	believe, based upon you may disagree	13	with certainty.
14	with some of the weights or and I	14	Q. That's fine.
15	think you're pretty clear in your report	15	Is there any methodologic
16	of some of the criticisms that you have	16	flaw, apart from you that you gave
17	about the way in which certain evidence	17	different different weights to the
18	was looked at by some plaintiffs'	18	evidence and you looked at the evidence
19	experts. Putting aside Smith-Bindman's	19	differently, is there any methodologic
20	meta-analysis for a moment.	20	flaw that you have identified in any of
21	Isn't it fair to say that	21	the plaintiffs' experts' reports?
22	they applied the same general methodology	22	MS. MILLER: Objection. Is
23	that you did?	23	there a specific expert you're
24	MS. MILLER: Objection.	24	referring to?

53 (Pages 206 to 209)

	Page 210		Page 212
1	MR. TISI: I'm if she	1	I assume your learned
2	says yes, I will then go through	2	counsel here knows how to defend a
3	them.	3	deposition. Can I assume that?
4	BY MR. TISI:	4	MS. SHARKO: Are we going to
5	Q. Apart from Smith-Bindman.	5	take my deposition now?
6	And I know you have a whole section on	6	MR. TISI: Well, I mean,
7	Smith-Bindman.	7	unless if you want to go under
8	A. Well, I I also have sort	8	oath I'm happy to ask you
9	of I I address other opinions that	9	questions.
10	experts have made and and say why I	10	MS. SHARKO: Is that a
11	I don't believe that the scientific	11	MR. TISI: Otherwise
12	evidence supports what they they came	12	otherwise, I would appreciate it
13	to.	13	if you would simply observe.
14	So obviously, I mean that	14	BY MR. TISI:
15	that's that I think is part and parcel	15	Q. So, Dr. Ballman, have you
16	as to	16	identified any methodologic apart from
17	Q. But that's a conclusion	17	disagreeing about some of the weights
18	question, right? So so	18	that Dr. Siemiatycki ascribed to certain
19	MS. SHARKO: You can't	19	studies, do you have any criticism of the
20	interrupt the witness.	20	methodology he used?
21	MR. TISI: You know, she	21	A. Of what he used in his
22	MS. MILLER: This is crazy.	22	meta-analyses?
23	MR. TISI: All right. You	23	Q. In hi in any in his
24	know	24	report, entirely.
	Page 211		Page 213
1			
1 2	MS. MILLER: You've	1 2	A. So, I mean, overall, you
3	interrupted every sentence that	3	know, I I think that there are flaws
4	she's given you since we came back	4	in the methodology of all the experts.
	from the break and that's just not	5	Q. Okay. Tell me what tell
5	fair.	6	me what they are.
6 7	MR. TISI: I must tell you,	7	A. Well, we can go through my
8	you are not going to do this.	8	report.
9	MS. MILLER: I'm not going to do what?	9	Q. No, I want you you can go through your report. But I just give
10		10	
11	MR. TISI: So so let me let me	11	me a general understanding about what
12	MS. SHARKO: You're not	12	your criticism with Dr. Siemiatycki is.
13		13	MS. MILLER: If you need to
14	going to do this.	14	look at your report THE WITNESS: Yeah, I
15	MR. TISI: Are we doing one or two now?	15	can't
16		16	MS. MILLER: don't let
17	MS. SHARKO: Mr. Tisi, you	17	him prevent you from looking at
18	can't interrupt the witness. MR. TISI: Okay.	18	your report.
19	MS. SHARKO: You know that,	19	THE WITNESS: Yeah, and I
20	so behave yourself.	20	need to I need to look at
21	MR. TISI: We have so why	21	his the expert report of
22	don't you switch seats you can	22	Dr. Siemiatycki in order to make
23	switch seats and we can go	23	sure that
43			
24	we we can have one at a time.	24	BY MR. TISI:

54 (Pages 210 to 213)

	Page 214		Page 216
1	Q. As you sit here right now	1	so I don't know exactly what I'm going to
2	without looking at his report, do you	2	be questioned on.
3	have any criticisms of Dr. Siemiatycki	3	Q. Okay. Now, you offered an
4	that you can that you can articulate	4	opinion in the Viagra Cialis product
5	for me?	5	liability litigation?
6	MS. MILLER: Objection.	6	A. I did.
7	That's not fair. The witness said	7	Q. Like in this case, you were
8	she needs to look at her report.	8	asked by a pharmaceutical company lawyer
9	She needs to look at his report.	9	to testify on issues about whether or not
10	This is not a memory test, is it?	10	a product causes a disease, correct?
11	MR. TISI: I'm here to take	11	MR. LOCKE: Objection.
12	her deposition.	12	THE WITNESS: In Viagra, I
13	BY MR. TISI:	13	was asked to evaluate the totality
14	Q. So I'd like to know, as you	14	of the evidence that exists as to
15	sit here I assume you spent time with	15	whether or not exposure to Cialis,
16	counsel preparing, correct?	16	in particular, I think, because
17	A. I would like to see the	17	Lilly, I think, is Cialis and not
18	reports, please, because I don't want to	18	Viagra.
19	misstate something just because my memory	19	Whether or not it causes
20	is is not well doing well right	20	melanoma.
21	now.	21	BY MR. TISI:
22	Q. So you cannot you	22	Q. Okay. So the answer to my
23	cannot is it fair to say that you	23	question is you were asked to look at a
24	cannot offer an opinion as to the	24	general causation question as to whether
21	*	21	
	Page 215		Page 217
1	methodologic flaws of Jack Siemiatycki	1	or not a product causes a disease?
2	without sitting here and going through	2	MS. MILLER: Objection.
3	his report?	3	THE WITNESS: I don't
4	MS. MILLER: Objection.	4	know
5	BY MR. TISI:	5	MS. MILLER: Please.
6	Q. Because I assumed you would	6	THE WITNESS: that the
7	have done that before today.	7	I'm sorry.
8	MS. MILLER: Objection.	8	Can I answer?
9	THE WITNESS: I think it's	9	BY MR. TISI:
10	fair to say that I have reviewed	10	Q. Please.
11	many expert reports. I wrote my	11	MS. MILLER: Of course.
12	report. And everything is	12	Just give me time. That's all I'm
13	becoming a jumble. And I just	13	asking.
14	want to make sure that I I can	14	THE WITNESS: So, I don't
15	refresh my memory in order to	15	know what general causation means.
16	render the opinions you're looking	16	BY MR. TISI:
17	for.	17	Q. I didn't ask you general
18	BY MR. TISI:	18	causation.
19	Q. Do you understand that in a	19	A. I thought you did.
20	Daubert hearing that you too will be	20	Q. If I did the question was
21	questioned about your both your	21	to whether
22	qualifications and your methodology? Do	22	MS. MILLER: "So the answer
23	you understand that?	23	to my question is you were asked
24	A. I I I'm not a lawyer,	24	to look at a general causation

55 (Pages 214 to 217)

	Page 220
1 question." You did say 1 That was your depos	ition.
2 MR. TISI: Well, I wasn't 2 A. Oh, okay.	
3 talking general causation. 3 Q. Okay. You	
4 BY MR. TISI: 4 A. Yeah, the re	
5 Q. A general question about 5 probably midyear.	
6 whether or not a product causes a 6 Q. Was the cau	usation
	gy that you employed
8 MS. MILLER: Objection. 8 to look at the question	
9 THE WITNESS: Again, I told 9 not Cialis was capable	
	methodology you used in
there. I was and I am giving 11 this case?	23 3
	approach was
generalities. I was asked to look 13 similar. I review the	
at the totality of the 14 literature. I I, you	
	or not there appears to
whether or not there is evidence 16 be evidence of causa	
that use of Cialis or a PDE5 17 established epidemio	•
18 inhibitor more generally causes 18 come to a conclusion	
19 melanoma. 19 Q. Is there any	
20 BY MR. TISI: 20 change your methodo	-
21 Q. Okay. And so you were 21 Viagra/Cialis and thi	
22 looking about a causation question? 22 words, did you use a	
23 MS. MILLER: Objection. 23 different standard to	
24 THE WITNESS: Again, I told 24 or the same standard	
Page 219	Page 221
1 you what I was I don't know 1 MS. MILLE	ER: Objection.
2 why 2 BY MR. TISI:	art. Cojection.
	e as you did
4 Q. You can't tell me whether or 4 here?	y
	ER: Sorry. I
	re done. Objection.
	ESS: I don't know
	different standard
9 at. 9 versus the same	
	king about did I
	ords in my report?
12 Let me ask you. Let me 12 Did I use different	
13 change it. 13 BY MR. TISI:	
8	sking whether you
	al framework. For
TTO Causation report ray out your TTO used the same gener	
T · · · · · · · · · · · · · · · · · · ·	e the Bradford Hill
16 qualifications let me rephrase the 16 example, did you use	
16 qualifications let me rephrase the 16 example, did you use 17 question. 17 framework with resp	
16 qualifications let me rephrase the 17 question. 18 Your Viagra/Cialis report 16 example, did you use 17 framework with responsible to the type of type of the type of the type of the type of type of the type of ty	pect to Viagra Cialis
16 qualifications let me rephrase the 17 question. 18 Your Viagra/Cialis report 19 was issued last year in mid-2018, 16 example, did you use 17 framework with respond that you used here? 18 that you used here? 19 A. I used estal	bect to Viagra Cialis
16 qualifications let me rephrase the 17 question. 18 Your Viagra/Cialis report 19 was issued last year in mid-2018, 20 correct? 16 example, did you use 17 framework with resp 18 that you used here? 19 A. I used estal 20 epidemiology princip	bect to Viagra Cialis blished ples for looking at
16qualifications let me rephrase the16example, did you use17question.17framework with resp18Your Viagra/Cialis report18that you used here?19was issued last year in mid-2018,19A. I used estal20correct?20epidemiology princi21A. I believe that's about21causation, which are	blished ples for looking at based in the
16qualifications let me rephrase the16example, did you use17question.17framework with resp18Your Viagra/Cialis report18that you used here?19was issued last year in mid-2018,19A. I used estal20correct?20epidemiology principal21A. I believe that's about21causation, which are22the or October maybe. I'm not I22Bradford Hill criteri	blished ples for looking at based in the

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different — in other words, if I looked a tyour Viagra Cialis deposition and your sexpert report, would it reflect the same methodology that you used here? A. I — I don't know how you be would — Q. Putting aside the evidence. MS. MILLER: She was in the middle of — Students and say, you know, in both of the same of the stud		Page 222		Page 224
at your Viagra Cialis deposition and your sexpert report, would it reflect the same emethodology that you used here? 5	1	different in other words, if I looked	1	BY MR. TISI:
a expert report, would it reflect the same methodology that you used here? 5 A. 1 – I dorft know how you would — 6 Would — 7 Q. Putting aside the evidence. 8 MS. MILLER: She was in the middle of — 10 MR. TISI: Well, I – I — 11 MS. MILLER: She was 11			2	
## methodology that you used here? A. I - I don't know how you 6 would 7 Q. Putting aside the evidence. 8 MS. MILLER: She was in the middle of 10 MR. TISI: Well, I - I 11 MS. MILLER: She was 12 literally in the middle of the 13 sentence. I don't think 14 MR. TISI: I am going to 15 withdraw the question, Counsel. 16 MS. MILLER: Okay. 17 BY MR. TISI: 18 Q. Okay. Putting aside the 19 fact that the evidence is different -1 20 mean, obviously it's a different product, different disease here. Putting that 21 susce aside. 22 is use aside. 23 If the same did you apply 24 the same general framework and approach 1 in looking at the causation question in 2 Viagra/Cialis as you did here? 3 MS. MILLER: Same 4 objections. 5 THE WITNESS: So, as I 6 explained, I - I - and I don't 7 know how to explain it any 8 differently. 8 opinion was. 10 MS. MILLER: Objection. 11 methodology you used in Viagra-Cialis 12 truthful? 13 MS. MILLER: Objection. 14 was causation, and then I - I 15 rendered sort of what I - what my opinion was. 16 Q. And that is the - that is 17 the WITNESS: I think it's 28 an accepted epidemiological - or 18 A. I - I'm not sure what 29 you're looking for. I have my - 3 won're looking for. I have my - 4 you're looking for. I have my - 5 A. I - I'm not looking for mything. I'm just looking to say, if you were giving a lecture to to to the say, if you were giving a lecture to to to the same in the looking to say, if you were giving a lecture to to to the same in the looking to say, if you were giving a lecture to to to the same in the literature, I applied bradford Hill criteria as the basis to determining with the same way I did it in the tale litigation. 18 Q. Did you do it the same way I did it in the tale litigation. 19 A Again, I said I reviewed the literature, I applied Bradford Hill criteria as the basis to determining with the basis as to determining with the part of t				
5 A. I—I don't know how you 6 would— 7 Q. Putting aside the evidence. 8 MS. MILLER: She was in the 9 middle of— 10 MR. TISI: Well, I—I— 11 MS. MILLER: She was 11 tireally in the middle of the 12 literally in the middle of the 13 sentence. I don't think— 14 MR. TISI: I am going to 15 withdraw the question, Counsel. 16 MS. MILLER: Okay. 17 BY MR. TISI: 18 Q. Okay. Putting aside the 19 fact that the evidence is different—I 20 mean, obviously it's a different product, 21 different disease here. Putting that 22 issue aside. 23 If the same—did you apply 24 the same general framework and approach 25 If the same denoral framework and approach 26 with same general framework and approach 27 methodology you used in Viagra-Cialis truthful? 28 differently. 29 So I—I looked at all the 20 available evidence that was in the 21 literature. I used the Bradford 22 literature as the basis for 23 looking at whether or not there 24 differently. 25 So I—I looked at all the 26 available evidence that was in the 27 literature, I used the Bradford 28 differently. 29 So I—I looked at all the 20 available evidence that was in the 21 literature. I used the Bradford 22 literature as the basis for 23 looking at whether or not there 24 was causation, and then I—I 25 rendered sort of what I—what my opinion was. 26 plane the evidence hat is the estandard epidemiologic methodology, true? 27 mything in mot looking for. Inave my—anything in anything in anything in anything in a lecture to—to students and say, you know, in both of students and say, you know, this is how you do it. For example, in 26 literature, I applied Bradford Hill cirteria as the basis as to determining whether or not there is causality, and I rendered an opinion. 27 literature, I applied Bradford Hill cirteria as the basis as to determining whether or not there is causality, and I rendered an opinion. 28 literature, I applied Bradford Hill cirteria as the basis as to determining whether or not there is causality, and I rendered an opinion. 29 So I—I looked at all the interior				
6				
7				· · · · · · · · · · · · · · · · · · ·
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23 an accepted epidemiological or 23 Q. Do you know that there's				
124 epidemiologic methodology. 124 A Well the denosition?	24	epidemiologic methodology.	24	A. Well, the deposition?

57 (Pages 222 to 225)

	Page 226		Page 228
1	Q. Mm-hmm.	1	MS. MILLER: Okay. Go
2	A. In Viagra-Cialis?	2	ahead.
3	Q. Mm-hmm.	3	BY MR. TISI:
4	A. I've read parts of it, yes.	4	Q. Would you agree that
5	Q. Okay. Do you know that	5	you've testified to this before, sort of
6	there's a Daubert challenge to you in	6	about epidemiology and biostatistics.
7	Viagra-Cialis?	7	While there's some overlap obviously
8	A. Yes, I am aware of that.	8	between biostatistics and epidemiology,
9	Q. Okay. And you know that the	9	you've pointed that out. And these are
10	hearing is in June, correct?	10	related fields, that they are two
11	A. No, I didn't know that.	11	distinct scientific disciplines?
12	Q. Okay. Have you not been	12	A. I think, as I mentioned,
13	told that there's a hearing set?	13	that at the basic level, the overlap is
14	A. No, I have not been told	14	almost complete between epidemiology and
15	that.	15	biostatistics.
16	Q. And is there anything about	16	Q. Okay.
17	your approach in Viagra-Cialis as a	17	A. So Epi 101 and Biostats 101
18	result of re-reading your testimony that	18	are are very, very similar. If you
19	you would change about your approach that	19	would look at table of contents of books
20	you did it here?	20	they would have similar concepts being
21	A. No.	21	being taught.
22	MS. MILLER: Objection.	22	I would also say that within
23	BY MR. TISI:	23	clinical research the overlap between
24	Q. Okay. So that	24	epidemiology and biostatistics is very
	Page 227		Page 229
1	Page 227 MS. MILLER: Please try to	1	Page 229 complete.
1 2		1 2	
	MS. MILLER: Please try to		complete.
2	MS. MILLER: Please try to remember to leave me time to	2	complete. I would also say that
2	MS. MILLER: Please try to remember to leave me time to object, please.	2 3	complete. I would also say that epidemiology as a field has other areas
2 3 4	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI:	2 3 4	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with
2 3 4 5	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you	2 3 4 5	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health.
2 3 4 5 6 7 8	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are	2 3 4 5 6 7 8	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that
2 3 4 5 6 7	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm	2 3 4 5 6 7 8	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are
2 3 4 5 6 7 8	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to	2 3 4 5 6 7 8	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new
2 3 4 5 6 7 8 9 10	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer.	2 3 4 5 6 7 8 9 10	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's
2 3 4 5 6 7 8 9 10 11	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my	2 3 4 5 6 7 8 9 10 11	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics
2 3 4 5 6 7 8 9 10	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer.	2 3 4 5 6 7 8 9 10 11 12	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's
2 3 4 5 6 7 8 9 10 11 12 13	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on?	2 3 4 5 6 7 8 9 10 11 12 13	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical
2 3 4 5 6 7 8 9 10 11 12 13 14 15	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we	2 3 4 5 6 7 8 9 10 11 12 13 14 15	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It would be so much smoother MR. TISI: I am so happy	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what what I do. Q. Okay. Let me let me move
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It would be so much smoother MR. TISI: I am so happy MS. MILLER: and the depo	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what what I do. Q. Okay. Let me let me move to strike the answer because it wasn't
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It would be so much smoother MR. TISI: I am so happy MS. MILLER: and the depo would go so much quicker.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what what I do. Q. Okay. Let me let me move to strike the answer because it wasn't that wasn't my question.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It would be so much smoother MR. TISI: I am so happy MS. MILLER: and the depo would go so much quicker. MR. TISI: I will submit	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what what I do. Q. Okay. Let me let me move to strike the answer because it wasn't that wasn't my question. My question was, would you
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Please try to remember to leave me time to object, please. BY MR. TISI: Q. Would you MS. MILLER: You two are talking over each other and I'm not having an opportunity to object properly. I want the record to show my objection before your answer. MR. TISI: How about if I just agree that you object to every question and we can move on? MS. MILLER: How about we just agree that you start asking unobjectionable questions? It would be so much smoother MR. TISI: I am so happy MS. MILLER: and the depo would go so much quicker.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	complete. I would also say that epidemiology as a field has other areas that aren't so overlapped with biostatistics, such as public health. That that is a pure epi sort of topic. Within biostats, there are areas in biostats that are not that overlapping with epidemiology. It's the area where people want to develop new mathematical techniques and so that's almost more overlapping with mathematics because of the theory beneath it. And so I, as a clinical research in my career over the last 20-some years, sits right in that really overlapped area. And so that's what what I do. Q. Okay. Let me let me move to strike the answer because it wasn't that wasn't my question.

58 (Pages 226 to 229)

	Page 230		Page 232
1	Would you agree that being	1	MS. MILLER: Objection.
2	an epidemiologist does not automatically	2	What do you mean by her website?
3	qualify a professional as a statistician	3	MR. TISI: Can we have the
4	or biostatistician?	4	next exhibit, please. Exhibit 11.
5	MS. MILLER: Objection.	5	(Document marked for
6	THE WITNESS: I I'm not	6	identification as Exhibit
7	sure what exactly you're you're	7	Ballman-11.)
	* * *	8	BY MR. TISI:
8	asking there. BY MR. TISI:	9	
10	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10	Q. This is your website from Weill Cornell?
	Q. Has every can every	11	
11	epidemiologist do what you do?		A. I I don't know if it's my
12	A. I I would have to see	12	website. I believe it's the division's
13	what the particular epidemiologist	13	website of biostatistics and
14	Q. I'm not asking that	14	epidemiology.
15	A the experience and	15	Q. It has your picture on it?
16	training is in order to	16	A. Well, it has my picture on
17	Q. Because because they are	17	it, but it says biostatistics and
18	distinct fields, true?	18	epidemiology. It doesn't say Karla
19	There is overlap, just like	19	Ballman at the top.
20	cardiology and cardiac surgery, overlap,	20	Q. Actually it says, "Weill
21	right?	21	Cornell Medical Center Biostatistics and
22	MS. MILLER: Objection.	22	Epidemiology," correct?
23	She's	23	A. Way at the top, yes.
24	BY MR. TISI:	24	Q. Right. And underneath your
	Page 231		Page 233
1	Q. Epidemiology and	1	picture it says Dr. Karla Ballman?
2	biostatistics overlap, true?	2	A. Yes, that's correct.
3	MS. MILLER: That's three	3	Q. And underneath that it has
4	questions. I'm looking at the	4	two separate definitions, one for
5	BY MR. TISI:	5	biostatistics and one for epidemiology,
6	Q. I'm asking you the question:	6	correct?
7	Do epidemiology and biostatistics	7	A. Yeah, that's what's there.
8	overlap?	8	Q. "Epidemiology says it's
9	A. They overlap considerably in	9	concerned with the distribution,
10	some areas.	10	causation, and control of disease across
11	Medicine and epidemiology	11	time and space in human population."
12	overlap. There are medical doctors that	12	Do you see that?
13	do epidemiology. But medicine is very	13	A. Yes, that's what's written
14	different and distinct discipline from	14	there, yes.
15	epidemiology.	15	Q. Okay. And underneath
16	Q. Is epidemiology concerned	16	above that is a section that says,
17	with the distribution causation and	17	"Biostatistics is the application of
18	control of disease across time and space	18	statistical techniques to scientific
19	and human populations?	19	research in health-related fields
20	A. I believe that's one	20	including medicine, biology, and public
21	definition that one could use.	21	health in the development of novel
22	Q. In fact, that's the	22	methodologies that could improve the
23	definition on your website, is it not?	23	application. Since the beginning of the
24	A. It may well be.	24	Twentieth Century, the field of
4 '	A. It may wen be.	4 4	i wendedi Centui y, the Held Of

59 (Pages 230 to 233)

	Page 234		Page 236
1	biostatistics has become an in	1	definitions, one for biostatistics and
2	dispensable tool in improving health and	2	one for epidemiology, correct?
3	reducing illness."	3	MS. MILLER: Objection.
4	Correct?	4	THE WITNESS: It has it
5	A. What you read there is what	5	has two statements there. One for
6	it states. I mean, I'll point out that's	6	biostatistics and one for
7	this is a biostatistics	7	epidemiology. And then it has,
8	Q. That's all I asked.	8	"The mission of the division of
9	A and epidemiology	9	biostatistics and epidemiology."
10	department	10	And that's not that's the
11	Q. All I asked is whether I	11	mission of our division
12	read it correctly.	12	MR. TISI: Counsel
13	A. You did read it correctly.	13	THE WITNESS: which is to
14	Q. Thank you. This is your	14	develop epidemiologic studies in
15	website for your department, correct?	15	the fields of hypertension,
16	A. So I don't think you're	16	women's health, perioperative
17		17	MR. TISI: honestly can
18	letting me sort of address what you're trying to imply.	18	•
19		19	you just ask your witness to
20	Q. I'm not trying to imply	20	answer the question.
21	anything.	21	THE WITNESS: outcomes and
22	MS. MILLER: Please, let her	22	anesthesiology. And that is
	answer.	23	actually quite outdated because we
23	MR. TISI: No, the problem		do more than that.
24	is I think her answer really	24	MR. TISI: Okay. Okay.
	Page 235		Page 237
1	illustrates the problems here.	1	Counsel, I'm really going to ask
2	She's anticipating where she	2	you, maybe we can take a break and
3	thinks that I'm going. I'm asking	3	you can ask your witness to answer
4	her very straightforward	4	the question.
5	questions.	5	BY MR. TISI:
6	BY MR. TISI:	6	Q. I'm simply asking, are there
7	Q. The question is, is this	7	two separate definitions on this page?
8	your department's web page?	8	MS. MILLER: You've asked
9	A. Yes.	9	that three times.
10	MS. MILLER: I think you	10	MR. TISI: Well, but I'm not
11	know the answer to that. So	11	getting an answer. She wants to
12	that's	12	go and read the rest of the
13	MR. TISI: Okay. Well, I	13	document.
14	have to put it on the record,	14	MS. MILLER: You said it
15	Counsel.	15	has she did answer. "It has
16	BY MR. TISI:	16	two separate definitions"
17	Q. Is it your department's web	17	MR. TISI: And she goes on.
18	page?	18	MS. MILLER: "one for
19	A. I believe it is. I haven't	19	biostatistics and one for
20	been out at that web page in I don't	20	epidemiology, correct?" And she
21	know when. So if you say this is what	21	says, "It has two statements
22	you got from our as our division's web	22	there, one for biostatistics and
23	page, I will take that as your word.	23	one for epidemiology. And then it
24	Q. And it has two separate	24	has the mission of division of

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	Page 238		Page 240
1	biostatistics"	1	Q. These are two separate
2	MR. TISI: Did I ask her	2	these are two separate statements by
3	that? Did I ask her about the	3	biostatistics and epidemiology, true?
4	mission?	4	MS. MILLER: Objection.
5	MS. MILLER: Did she not	5	Asked and answered four times or
6	answer your question, sir?	6	five.
7	MR. TISI: Yes, but then she	7	BY MR. TISI:
8	goes on a speech.	8	Q. Are they separate
9	MS. MILLER: You are pulling	9	statements?
10	statements out of context	10	A. They are separate
11	MR. TISI: I'm not pulling	11	statements.
12	it out of context.	12	Q. Thank you.
13	MS. MILLER: and she's	13	A. Because
14	providing some context. She's	14	MS. MILLER: Finish your
15	providing the context	15	sentence if you'd like to.
16	MR. TISI: Counsel.	16	THE WITNESS: Well, they are
17	Counsel.	17	separate statements, because it
18	MS. MILLER: Why are you	18	says biostatistics and
19	yelling at me?	19	epidemiology on top. So, I mean,
20	MR. TISI: Because I think	20	why wouldn't you have sort of two
21	this is bizarre.	21	separate, you know
22	MS. MILLER: Really? I	22	BY MR. TISI:
23	think you're	23	Q. I am not asking why you
24	MR. TISI: I simply asked	24	would. I'm just asking whether you do.
	Page 239		Page 241
1	are there two definitions on the	1	A. Yeah, there are two
2	page, one for epidemiology. I did	2	separate
3	not ask anything about the mission	3	Q. Perfect.
4	of the department, did I?	4	A descriptions.
5	MS. MILLER: She answered	5	Q. Perfect. Now, the next
6	your question.	6	question is, there are people within your
7	THE WITNESS: Actually, can	7	department who actually do have degrees
8	I can I. You said two	8	in epidemiology, true?
9	definitions. And I said I	9	A. I know of one. Can you name
10	think I said two statements. It	10	several more?
11	nowhere here says these are	11	Q. Dr. Drusin. He's a medical
12	definitions.	12	doctor with a degree in epidemiology?
13	BY MR. TISI:	13	A. He is adjunct he is in my
14	Q. Okay.	14	department my division I think. But
15	A. These are just descriptions,	15	it's unclear as to whether he belongs
16	and it's not a definition. And okay.	16	there, because we had a whole had a
17	Q. I'll let I'll let I'll	17	whole restructure of our department a
18	let the judge and jury decide whether or	18	while ago. And there were other
19	not these are definitions when it says	19	divisions, and he belonged to a different
20	"biostatistics is" and "epidemiology is."	20	division and got put into my
21	We'll let them decide that.	21	Q. Does Dr. Gerber have a Ph.D.
22	MS. MILLER: What jury are	22	in epidemiology?
23	you talking about?	23	A. She does have a Ph.D. in
24	BY MR. TISI:	24	epidemiology and does and we talked

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about her work Q. I just asked you whether she had it. Thar's all. Simple question. A. O. Okay. I'm just trying to say that she feels she's more of a biostatistician. Q. I'm not asking what she feels. Doctor. I really am asking you, does she have a degree in epidemiology. A. She has a degree in epidemiology. Q. Doce Dr does Professor lepidemiology. Q. Doce Dr does Professor Christos have a master's in epidemiology? A. I don't know. I believe Tis in public health. Q. Okay. A. Which is different from epidemiology Q. Now Q. Now Do. Oxory. Doce or, I'm going to show you what's marked as Exhibit Number 12. This will be very quick. Q. Oxou what's marked as Exhibit Number 12. This will be very quick. Q. Whild you peas go to the next page and look down the page, and when you were asked that question, what did you say? A. So - and I believe I answered this before. Q. I'm just asking what you said. Would you read into the record what you said. A. I will. I will. Q. Thank you. A. I will. I will. Q. Thank you. A. So it says, "I'm Karla Ballman. That edivision chief of biostatistics and epidemiology at Weill Cornell Medicine in New York City, and obviously i'm a statistician." Q. Thank you. A. Let me point out that there are others here who also have MPH Page 243 This will be very quick. Q. Oxay i'm statistician." Q. Thank you. A. Let me point out that there are others here who also have MPH Page 245 degrees, and they identify themselves as doctors. So again it depends upon what role you play within these committees. Q. Oxay. And there's a web page for you on SARC. Q. Oxay. And there's a web page for you ox SARC. A. SARC is the - is a nonprofit organization that does research in sarcoma. Q. Oxay. And there's a web page for you ox SARC. You read that correctly. A. Well, I - I see the document that you say or the control of the control ox or the profit of identification as Exhibit Number 13. Do you see that? A. Well, I - I see the document that you handed me, yes. Q. And in the on Page 7 it says,		Page 242		Page 244
2 Q. Just asked you whether she 3 had it. Thar's all. Simple question. 4 A. Okay. In just trying to 5 say that she feels she's more of a 6 biostatistician. 7 Q. I'm not asking what she 7 feels, Doctor. I really am asking you, 9 does she have a degree in epidemiology. 10 A. She has a degree in epidemiology. 11 epidemiology. 12 Q. Does Dr does Professor 13 Christos have a master's in epidemiology? 14 A. I don't know. I believe 15 it's in public health. 15 it's in public health. 16 Q. Okay. 17 A. Which is different from epidemiology 18 epidemiology 20 A in the same way as 21 statistics a lot of overlap, like with biostatistics. 23 Q. Doctor, I'm going to show 24 you what's marked as Exhibit Number 12. 25 BY MR. TISI: 6 Q. This is a portion of a transcript from the Center For Devices and Radiologic Health Medical Advisory Committee that you sat on in June of 2018. 18 Do you see that? 19 Do you see that? 20 And in the on Page 7 it says, from Dr. Nathan, it says fourth paragraph down, "Before we begin, I'd like to ask our distinguished panel members and FDA staff seated at this table to introduce themselves. Please state your name, your area of expertise, your position, max the page and look down the page, and when you were asked that question, what did you say? 16 A. So and I believe I 17 answered this before. 20 I'm just asking what you said. 31 A. I will. I will. 32 Q. Thank you. 34 A. And again, I'm just rerieating that this is 35 Q. You don't need to reiterate. 36 I'm just simply asking you what you said. 37 Hank you. 38 A. And again, I'm just rerieating that this is 39 Q. You don't need to reiterate. 30 I'm just simply asking you what you said. 31 Cornell Medicine in New York City, and obviously I'm a statistician." 32 Q. Doctor, I'm going to show you what smarked as Exhibit Number 12. 39 Q. Doctor, I'm going to show you what you said it eries and the page and look down the page and look down the page and look down the apage in the maxing did you say? 30 A. I will. I will. 30 Q.	1	about her work	1	A. You read that correctly.
3				
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Page 243 This will be very quick. (Document marked for identification as Exhibit Mumber 12.) Ballman-12.) By MR. TISI: Q. This is a portion of a transcript from the Center For Devices and Radiologic Health Medical Advisory Committee that you sat on in June of 2018. Do you see that? A. Well, I I see the document that you handed me, yes. Q. And in the on Page 7 it says, from Dr. Nathan, it says fourth paragraph down, "Before we begin, I'd like to ask our distinguished panel members and FDA staff seated at this table to introduce themselves. Please 21 your position, and your affiliation. Page 243 degrees, and they identify themselves as doctors. So again it depends upon what role you play within these committees. Q. Doctor, you are a member of SARC, what is SARC? A. SARC is the is a nonprofit organization that does research in sarcoma. Q. Okay. And there's a web page for you on SARC. (Document marked for identification as Exhibit Ballman-13.) BY MR. TISI: Q. Exhibit Number 13. Does it identify you as statistician at the top? A. It does say statistician at the top. But it says I'm professor of biostatistics in the division of Weill				
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your position, and your affiliation. 21 the top. But it says I'm professor of biostatistics in the division of Weill				
We'll go counterclockwise and start with 22 biostatistics in the division of Weill				
Do you see that? 24 "She is a recognized expert in cancer"	1	Ms. Barnes."	23	Cornell biostatistics and epidemiology.

	Page 246		Page 248
1	research study design and analyses for	1	Q. This is the website of the
2	clinical trials."	2	American Statistical Association. And it
3	There's that overlap again	3	says the it says, "The American
4	with epidemiology.	4	Statistical Association is the world's
5	Q. Does it say anything about	5	largest community of statisticians. The
6	causation there?	6	Big 10 for statistics."
7	MS. MILLER: Objection.	7	Do you see that?
8	BY MR. TISI:	8	A. Yeah. I I just don't
9	Q. To say I'm an expert in	9	know. This is I I don't know where
10	analyzing whether or not substances cause	10	you pulled this off from the ASA. So I
11	disease?	11	mean, that's what it says on this
12	MS. MILLER: Objection.	12	particular page.
13	THE WITNESS: That that's	13	Q. And it has a directory, if
14	very specific.	14	you go to the last page, and you are
15	Let me say that if you	15	listed as a consultant.
16	BY MR. TISI:	16	Do you see that?
17	Q. Does it say that there?	17	A. Yes, I see that.
18	MS. MILLER: Objection.	18	Q. It has your phone number and
19	THE WITNESS: Well, it	19	your e-mail address and all the
20	doesn't say that there, but	20	information?
21	BY MR. TISI:	21	A. Yeah, mm-hmm.
22	Q. Thank you.	22	Q. Okay. Could you read
23	A it doesn't say many	23	read for the record what you identified
24	things that that I do.	24	to your colleagues as your areas of
	Page 247		Page 249
1	Q. Are you a member of the	1	expertise?
2	what's known as the American Statistical	2	A. Biometrics, and
3	Association?	3	biostatistics, and and data collection
4	A. I am.	1 2 3 4 5	procedures, operations research, and
5	Q. What is the American	5	statistical training.
6	Statistical Association?	6	Q. Anything else?
7	A. It's the American	7	A. Well, I just want to point
8	Statistical Association.	8	out that again data collection procedures
9	Q. Is it a reputable	9	is is an area of epidemiology, and
10	organization of statisticians?	10	biometrics and biostatistics, as I said,
11	MS. MILLER: Objection.	11	also have considerable overlap with
12	THE WITNESS: And	12	epidemiology.
13	epidemiologists.	13	Q. By the way, the American
14	BY MR. TISI:	14	you were an officer in the American
15	Q. Okay. And and	15	Statistical Association, I think you
16	epidemiologists. Okay.	16	said?
17	And the American Statistical	17	A. Did I say that?
18	organization, is and I'm going to have	18	Q. I think it's in your I
19	this marked as exhibit what is this,	19	think it's in your CV, your CV.
20	Exhibit 14?	20	A. I'll have to look at my CV.
21	(Document marked for	21 22	But I I did play some roles in there
	idontification on Freleibit		
22	identification as Exhibit		at some point.
	identification as Exhibit Ballman-14.) BY MR. TISI:	23 24	Q. They were volunteer roles, right?

63 (Pages 246 to 249)

	Page 250		Page 252
1	A. They were volunteer roles.	1	three-page exhibit. But the first
2	Q. Have you ever do you know	2	two pages are Page 1 of 2 and the
3	what it takes to be a fellow at the	3	last one is Page 2 of 2.
4	American Statistical Association?	4	Do you want me to pull out
5	A. No, I do not.	5	this so that it's an accurate
6	Q. Okay. Do you know that they	6	exhibit?
7	have a fellow program where colleagues	7	MR. TISI: That's fine.
8	have can nominate people with	8	Thank you.
9	distinguished careers in statistics for	9	MS. MILLER: So here we go.
10	membership in their organization?	10	I've pulled out the middle page,
11	A. I	11	and now we have Page 1 of 2 and
12	MS. MILLER: She just said	12	Page 2 of 2.
13	she doesn't know what it is.	13	BY MR. TISI:
14	MR. TISI: Then let's mark	14	Q. Okay. Have you ever been
15	it.	15	nominated as an ASA fellow, do you know?
16	THE WITNESS: Well, I I	16	A. I have no idea.
17	don't know the specifics of it.	17	Q. Okay. Have you are
18	But I I believe that's the	18	you are not an ASA fellow, are you?
19	purpose of and most fellowships	19	A. I am not an ASA fellow.
20	in any profession have that.	20	Q. Okay. And to be clear, an
21	(Document marked for	21	ASA fellow would be somebody whose
22	identification as Exhibit	22	contribution to the advancement of
23	Ballman-15.)	23	statistical science and places due weight
24	BY MR. TISI:	24	on public works, positions held with
	Page 251		Page 253
1	Q. I'm going to yeah.	1	employer, ASA activities, membership and
2	Other than my and I I	2	accomplishments in societies, and
3	sent this to my e-mail address, and I	3	professional activities.
4	apologize.	4	And you are not you
5	But other than that, this is	5	have you are not a fellow, correct?
6	a list from the website from the ASA.	6	MS. MILLER: Objection.
7	A. Mm-hmm.	7	THE WITNESS: I am not.
8	MR. TISI: I only have one	8	MS. MILLER: Please.
9	copy I printed out this morning,	9	THE WITNESS: You read that
10	I'm sorry, Counsel, if you would	10	correctly. I am not a fellow.
11	share it.	11	BY MR. TIŠI:
12	BY MR. TISI:	12	Q. In applying for funds
13	Q. It says, "A designation of	13	actually let me stop for a second.
14	an ASA fellow has been a significant	14	You know, from time to time
15	honor for nearly 100 years. People	15	the ASA issues statements about
16	can"	16	statistical issues?
17	MS. MILLER: Actually isn't	17	A. I'm vaguely aware that they
18	every page the same?	18	issue statements from time to time.
19	THE WITNESS: Oh yeah.	19	Q. Okay. In your CV you
20	MR. TISI: Maybe it is. I	20	identify past or present current grants.
21	apologize.	21	Have you do you know if whether you
22	MS. MILLER: Wait, this is	22	have ever asked for a identified
23	confusing. I just want to state	23	yourself as an epidemiologist by title,
24	for the record that this is a	24	as an epidemiologist, not as part of your

64 (Pages 250 to 253)

	Page 254		Page 256
1	department?	1	A. I have been to many
2	MS. MILLER: Objection.	2	professional and public meetings, I don't
3	BY MR. TISI:	3	know if I've ever stood up and said with
4	Q. As you are describing	4	certainty I cannot answer if I've ever
5	yourself, in a in a grant that you	5	stood up and said that.
6	have ever given for any purpose?	6	I do have to say that when
7	MS. MILLER: You just kicked	7	people hear biostatistics and clinical
8	me. Objection.	8	research, they intertwine epidemiology
9	MR. TISI: I apologize.	9	and biostatistics, so
10	THE WITNESS: I I have	10	Q. But you have never
11	been on so many grant and grant	11	represented to your colleagues
12	applications that I cannot off the	12	affirmatively, "I, Karla Ballman, an
13	top of my head tell you whether or	13	epidemiologist"?
14	not I have ever said I am an	14	MS. MILLER: Objection.
15	epidemiologist.	15	THE WITNESS: Again, in
16	BY MR. TISI:	16	situations and studies I'm in, by
17	Q. Have you ever to your	17	saying a biostatistics and knowing
18	knowledge ever stood up in a public	18	that I do cancer research, they
19	meeting and said, "I, Karla Ballman, is	19	know what that means and they know
20	an I am an epidemiologist"?	20	it involves study design. As you
21	MS. MILLER: Objection.	21	can look in my CV, I have many
22	BY MR. TISI:	22	case-control I've done
23	Q. Like you did before, and	23	case-control studies. I've done
24	say, "Îm a statistician"?	24	cohort studies. I've done
	Page 255		Page 257
1	MS. MILLER: Objection.	1	BY MR. TISI:
2	BY MR. TISI:	2	Q. Okay. Your department, your
3	Q. Have you ever told your	3	department offers a two-month review
4	colleagues, "I am an epidemiologist"?	4	course in epidemiology, taught by
5	MS. MILLER: It's really	5	Dr. Christos. Do you know that? In
6	hard, because I don't know when	6	October/November of every year?
7	your question ends. Because you	7	A. Is it called a review
8	ask a question, and then I object,	8	course?
9	and then you keep going.	9	Q. Yes.
10	MR. TISI: Okay. Fine. I'm	10	A. I'm just having some and
11		1 1 1	
	sorry.	11	can I see where you are getting at and
12	MS. MILLER: It's a very	12	what it is?
12 13	MS. MILLER: It's a very complicated	12 13	what it is? Q. Exhibit 16.
12 13 14	MS. MILLER: It's a very	12 13 14	what it is? Q. Exhibit 16. A. I just want to see what
12 13 14 15	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard.	12 13 14 15	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not
12 13 14 15 16	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But	12 13 14 15 16	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that.
12 13 14 15 16 17	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness,	12 13 14 15 16 17	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for
12 13 14 15 16 17 18	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know	12 13 14 15 16 17 18	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit
12 13 14 15 16 17 18	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know what question	12 13 14 15 16 17 18 19	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit Ballman-16.)
12 13 14 15 16 17 18 19 20	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know what question THE WITNESS: I'll	12 13 14 15 16 17 18 19 20	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit Ballman-16.) THE WITNESS: Is it part of
12 13 14 15 16 17 18 19 20 21	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know what question THE WITNESS: I'll BY MR. TISI:	12 13 14 15 16 17 18 19 20 21	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit Ballman-16.) THE WITNESS: Is it part of the CTSC program?
12 13 14 15 16 17 18 19 20 21 22	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know what question THE WITNESS: I'll BY MR. TISI: Q. Have you ever stood up in a	12 13 14 15 16 17 18 19 20 21 22	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit Ballman-16.) THE WITNESS: Is it part of the CTSC program? MR. TISI: Honestly, I've
12 13 14 15 16 17 18 19 20 21	MS. MILLER: It's a very complicated MR. TISI: I'm sorry it's hard. MS. MILLER: record. But it's not fair to the witness, because I don't do you know what question THE WITNESS: I'll BY MR. TISI:	12 13 14 15 16 17 18 19 20 21	what it is? Q. Exhibit 16. A. I just want to see what program it's a part of. I'm not disputing that. (Document marked for identification as Exhibit Ballman-16.) THE WITNESS: Is it part of the CTSC program?

65 (Pages 254 to 257)

			Page 260
1		1	
1	Q. This is Exhibit Number 17,	1 2	Q. I'm asking with the title
	ch is the list of courses that I got	3	of the course. I'm not asking the
	n the Weill Cornell website.		content now. So you made that very
4	A. I see, okay.	4	clear, that it overlaps, and the record
5	Q. Do you see where I'm	5	is clear on that.
6 refe	rring to?	6	I'm asking you have you ever
	A. Are you go ahead. Ask	7 8	taught a course with the word
8 your	r question. I'll let you say it. MS. MILLER: This is 17.	9	"epidemiology" in it? A. I do not believe I've taught
10		10	
11	Catherine saying she says that she	11	a course with epidemiology in it. Most
12	doesn't believe there's a 16, that	12	of those courses would be intro courses,
13	you went from 15 to 17. Is that correct?	13	and when I teach intro courses, I come at
14	MR. SOILEAU: He referenced	14	it and teach it from the biostats side.
15		15	That includes epidemiology as a part of
16	a 16, but then essentially withdrew it and moved to a new	16	it. But I have not taught an epidemiology 101 course. No, I've not
17	document and marked it as 17.	17	
18		18	had a course with epidemiology in the title.
19	MR. TISI: So why don't we mark it as 16.	19	
20	MS. MILLER: Why don't we	20	Q. In fact in fact, the only two courses that you taught at Cornell
21	mark it 16 for clarity going	21	Weill are introduction to biostatistics
22	forward. Thank you, Catherine.	22	and biostatistics 1?
	MR. TISI:	23	A. I'm trying to remember the
24	Q. So to be clear, this is the	24	titles. And, again, I don't know where
24		24	•
	Page 259		Page 261
	of courses that are offered by the	1	you're getting that information from. So
	ill Cornell Medical Center in	2	I want to make sure the titles are
	statistics and epidemiology?	3	correct.
4	A. I don't know. Because Madhu	4	MS. MILLER: Is that in your
	zumdar who is listed there, that was	5	CV?
	individual I replaced. So I don't	6	MR. TISI: It is.
	w where I mean, his is not	7	THE WITNESS: Okay. If it's
	ective of anything we're	8	in my CV. Thank you. And if I
9	Q. You see the date on top is	9	have only taught two courses. I
	e March 2019. I mean, it's off	10	am not quibbling about that.
	website. I don't know what to tell	11	BY MR. TISI:
	other than that's where I got it.	12	Q. Thank you.
13	A. Yeah, I agree. I don't know	13	A. I'm just trying to see, you
	at to tell you either. But that just	14	know, if it says intro to biostats or
	ws you that we don't keep our website	15	okay. Yeah one is part of the executive
	o date. But Madhu Mazumdar has not	16 17	MBA/MS program. And the other is part of
	n at Weill Cornell for almost four	1	our biostatistics and data science
	rs, if not more than four years so.		program. Those are two courses that I
19 20 you	Q. Let me ask you this. Have	19 20	have taught at Weill Cornell.
-	ever taught a course with the word	20	Q. Does Weill Cornell offer a
21 epi	demiology" in it?	22	Ph.D. or an MPH in epidemiology? A. Weill Cornell itself?
23	MS. MILLER: Objection. In the course or in the course	23	
		24 24	
∠ [⊥] Dĭ	MR. TISI:	Z 4	A. No, it does not.

66 (Pages 258 to 261)

	Page 262		Page 264
1	Q. Does and Cornell only	1	A. But the
2	offers epidemiology as a minor, correct?	2	Q. But let's let
3	A. I I couldn't comment on	3	MS. MILLER: That's not what
4	that. I don't know what the main campus	4	he said.
5	offers.	5	THE WITNESS: He didn't say
6	MS. MILLER: Were you asking	6	the methodology differed.
7	Cornell, as in not Weill Cornell	7	MR. TISI: Let's let's
8	but undergraduate? You said as	8	move on.
9	in undergraduate courses?	9	THE WITNESS: He said the
10	MR. TISI: I said in	10	individual risk factors differed
11	Cornell, regular Cornell, the	11	is my understanding.
12	Cornell upstate in Ithaca.	12	MS. MILLER: She said in
13	BY MR. TISI:	13	terms of how one would evaluate
14	Q. To be clear, you have no	14	factors. You're mischaracterizing
15	publications on ovarian cancer, correct?	15	her testimony.
16	MS. MILLER: Objection.	16	BY MR. TISI:
17	Asked and answered.	17	Q. Are there any publications
18	THE WITNESS: I have no	18	on your CV related to talc?
19	publications that have I	19	A. No, there are not.
20	believe, that are on ovarian	20	
21	cancer.	21	Q. Any publications even mention talc and cancer in the same
22	BY MR. TISI:	22	article?
23		23	MS. MILLER: Objection.
24	Q. Any publications on the risk factors for ovarian cancer?	24	We've been through this.
24		24	· · · · · · · · · · · · · · · · · · ·
	Page 263		Page 265
1	MS. MILLER: Objection.	1	THE WITNESS: I cannot say
2	THE WITNESS: Again, I just	2	that with certainty.
3	said I have no publications in	3	I you know, it's
4	ovarian cancer. I have	4	definitely not in the title, but I
5	publications on that evaluate	5	can't say for sure if if there
6	risk factors for many other	6	was talc somewhere mentioned in
7	cancers.	7	all 200 publications. I don't
8	BY MR. TISI:	8	know with certainty.
9	Q. But not ovarian?	9	BY MR. TISI:
10	A. Not ovarian, per se, but	10	Q. Any publications about
11	ovarian cancer is not any different from	11	asbestos?
12	other cancers in terms of how one would	12	A. No.
13	evaluate risk factors.	13	Q. Any publications about
14	Q. That's not what Dr. Neel	14	asbestos and ovarian cancer?
15	told us the other day. So we'll have to	15	A. Again, there are no
16	see whether he's right or you're right.	16	publications in ovarian cancer. So no.
17	A. Can you show me that	17	Q. Any publications where you
18	statement? I believe he was talking	18	reviewed evidence regarding causation for
19	about that there's issues about different	19	any disease through a Bradford Hill
20	subtypes of ovarian cancer. I didn't see	20	guideline?
21	that and that I don't think he said	21	A. So that is a little harder
22	that	22	to to I'll have to go through and
23	Q. He was very clear that risk	23	look through all the things. I mean,
24	factors are different between the two.	24	I I don't know for certain whether or

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	Page 266		Page 268
1	not I discuss any of the publications	1	in publication, in some of my
2	discuss causation.	2	publications, as I used in this analysis.
3	I know I have publications	3	Q. Do you think that if I went
4	that establish associations with things.	4	through each and every article there
5	And we just don't go any further, because	5	would be any mention of Bradford Hill?
6	association is not causation and there	6	A. I'm not sure with
7	was no reason to establish whether it was	7	100 percent certainty. But that may well
8	causal or not.	8	be the case. Just again, because it
9	Q. Right. So my question is,	9	doesn't say Bradford Hill does not mean
10	have you ever done an article where you	10	that the underlying methodology that was
11	did what you did here, which is look at	11	used was not based on the Bradford Hill
12	all the evidence, try to synthesize it	12	framework.
13	and determine whether or not there's	13	Q. Isn't it true that your
14	cause and effect that you can think of?	14	contribution to the vast majority of your
15	MS. MILLER: Objection.	15	200-plus articles is statistical design
16	THE WITNESS: So I would	16	and statistical evaluation and to the
17	have to say that I believe there	17	statistical methods you used in the paper
18	are articles here that we have	18	and that you are not either the first
19	established association and we	19	author or the last author?
20	realize that it it didn't merit	20	MS. MILLER: Objection.
21	going through Bradford Hill	21	That's like very, very, very
22	because it was because of the	22	compound.
23	methodology we did, that, you	23	THE WITNESS: I don't quite
24	know, we weren't we didn't	24	understand the question. I mean,
	Page 267		Page 269
1	think there it was sufficient	1	I can point out to numerous
2	to, like perhaps the odds the	2	publications, like, for clinical
3	risk ratio was like 1.3 or	3	trials. Typically, the first
4	something, pretty small.	4	author is the chair of the
5	BY MR. TISI:	5	clinical trial. The second author
6	Q. Okay. And so the answer to	6	is the the statistician that is
7	my question is, because of the results	7	on the clinical trial, to
8	that you got in your studies, you have	8	recognize their role in the design
9	never done in your published literature a	9	of the study, as well as the
10	full-blown Bradford Hill causation	10	interpretation of the data.
11	analysis because you didn't get that far?	11	BY MR. TISI:
12	MS. MILLER: Objection.	12	Q. My question is
13	That mischaracterizes the	13	MS. MILLER: She's answering
14	testimony.	14	your question.
15	BY MR. TISI:	15	MR. TISI: You're not
16	Q. If it is, correct me,	16	answering my question, Doctor,
17	please.	17	honestly.
18	A. No. In order to establish	18	MS. MILLER: She's doing her
19	causation, you have to start with that.	19	best.
20	And if it doesn't show that there's	20	MR. TISI: She's not.
21	causation, why would you write in sort of	21	BY MR. TISI:
22	a whole article, you know, we did	22	Q. I said in, how many very
23	Bradford Hill criteria? I mean, I'm	23	few of these articles in fact, I think
24	saying that the same methodology is used	24	I counted eight. I have to go back and

68 (Pages 266 to 269)

	Page 270		Page 272
1	check, it's certainly under ten, where	1	meta-analyses that I can count. She has
2	you were either the first or last author.	2	six published in JAMA. JAMA is a high
3	Would that be about accurate?	3	impact journal, would you agree?
4	MS. MILLER: Objection.	4	A. Yes, JAMA is a high impact
5	THE WITNESS: Yeah, I I	5	journal.
6	don't know. I mean, if you say	6	Q. Right. She has two
7	you counted it, I can go through	7	meta-analyses in high impact journals.
8	and count. But I'm just not sure.	8	Can you tell me whether or not you've
9	I'm trying to answer sort of what	9	ever published a meta-analysis in any
10	my role is in these studies.	10	high impact journal?
11	BY MR. TISI:	11	A. Can you show me those
12	Q. It would	12	references to the meta-analyses that she
13	A. And again, you don't know	13	published?
14	this field, but in clinical trials, I	14	Q. 47 47 she or you?
15	would never be the first and last author	15	A. Not me. Hers.
16	because I am not the study chair.	16	Q. I'm asking about yours.
17	The role what shows the	17	MS. MILLER: But you asked
18	contribution of me is the second	18	about
19	position, and there are many where I am	19	THE WITNESS: No, you asked
20	the second position. And in fact, on	20	about her.
21	things that have changed practice.	21	MS. MILLER: You said she
22	Q. You have criticized	22	has six published in JAMA. Would
23	Dr. Smith-Bindman and her meta-analysis,	23	you agree?
24	correct?	24	MR. TISI: No, I said two.
	Page 271		Page 273
1	A. I I show where I think	1	BY MR. TISI:
2	there are some limitations in her	2	Q. No, I didn't ask I said I
3	analyses, yes.	3	will represent to you that she has two
4	Q. Well, you said that they	4	published in JAMA. She has six
5	were flawed. I think that's you used	5	meta-analyses published total.
6	the word flawed.	6	MS. MILLER: I'm looking at
7		7	
8	A. I may have used the word "flawed."	8	the realtime. It says, "You have
9		9	published you've been on
	Q. Do you know that	l .	articles or three meta-analyses
10	Dr. Smith-Bindman, unlike yourself, is	10	that I can count. She has six
11	actually submitting her analysis to peer	11 12	published in JAMA. JAMA is a high
12	review. Does that surprise you?		impact journal. Would you agree?"
13	A. I did not know that.	13	BY MR. TISI:
14	MS. MILLER: When you're	14	Q. Okay. Well, let me rephrase
15	ready, they sometimes take away	15	the question. She has six meta-analyses,
16	the food away by 1:00. So we	16	two published in JAMA. You would agree
17	should probably wrap up and take a	17	that JAMA is a high impact journal?
18	break.	18	A. Well, I just want to see
19	MR. TISI: I'm almost done	19	I want to see those citations
20	with this section here.	20	Q. I'm not asking you
21	MS. MILLER: Okay.	21	A because you're saying
22	BY MR. TISI:	22	she. I mean, does it where is she in
23 24	Q. So you've published. You've been on articles where three	23	the author list. I don't know even what
	noon on orticles where three	24	you're

69 (Pages 270 to 273)

	Page 274		Page 276
1 Q. Is th	hat important?	1	MR. TISI: I understand.
	on't know. I just want	2	I'm almost done. The food is
	he titles are of the	3	not
	en let's talk about you.	4	MS. MILLER: I think we've
_	rticles.	5	just been going an hour. It's a
	's talk about you. In	6	good time to break.
	iblished meta-analyses,	7	MR. TISI: I understand.
	68, and 142 on your CV, were	8	I'm just at the end of the
	designer of the study?	9	MS. MILLER: Okay. Great.
10 A. I wa		10	MS. SHARKO: Did you miss
	MILLER: Do you want to	11	me?
12 see?	WILLELM: Do you want to	12	BY MR. TISI:
13 BY MR. TIS	Ţ·	13	Q. The next one is which one,
	68, and 142.	14	68?
,	ank you. Yeah, yeah,	15	A. And I see that one.
16 yeah.	ilik you. Tean, yean,	16	Q. And that's which one is
•	MILLER: Would it be on	17	that one? Is that O'Sullivan, or is that
	I found the 47.	18	142?
	WITNESS: No, it's not	19	
20 that list.	WITHESS. NO, It's not	20	A. No, 68 is Witt, Gami, Ballman, Brown.
	MILLED. There's so many	21	•
	MILLER: There's so many	22	Q. And the other one is 142 is O'Sullivan.
	WITNIEGG. It would be my	23	A. Yes.
	WITNESS: It would be my		
24 CV may	be? Is that what you're	24	(Document marked for
	Page 275		Page 277
	bout my CV?	1	identification as Exhibit
	TISI: Let me see it.	2	Ballman-17.)
	MILLER: Is this the	3	BY MR. TISI:
	nt? It's 47, Witt, Ballman.	4	Q. I'm going to hand you
	WITNESS: That's one.	5	O'Sullivan. Did you play a substantial
	MILLER: So then I think	6	role in the meta-analysis which is 142,
	aybe the right list.	7	the O'Sullivan meta-analysis?
	WITNESS: Yeah, I see	8	A. What do you mean by a
9 it.		9	substantial role?
	MILLER: Okay. Great.	10	Q. Did you design it?
	WITNESS: Again, you see	11	A. I was part of the group, so
	nd. So that means I	12	this is actually a pooled analyses.
1 2	very integral role in	13	Q. It says meta-analysis in the
14 this		14	title.
15 BY MR. TIS	I:	15	A. Yeah. So you can't get
16 Q. Tha	nt's Number 47?	16	everything out of titles, right? So a
17 A. Yep	0.	17	pooled analysis is a type of
	d what's that one called?	18	meta-analysis. It's a much stronger
_	e Incidence of Stroke	19	meta-analysis in the sense that what
	rdial Infarction: A	20	happens is you get individual patient
21 Meta-Analys		21	level data.
_	MILLER: Again, I just	22	So this is pooling data
	suggest that we break for	23	from, like, the largest clinical trials
want to s			· · · · · · · · · · · · · · · · · · ·

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	Page 278		Page 280
1	and that's Herceptin for women that have	1	times.
2	HER2 positive breast cancer. I control	2	BY MR. TISI:
3	the data for one of the big trials in	3	Q. I'm asking you I'm asking
4	trastuzumab.	4	you whether or not you, by training and
5	And so I was part of this	5	experience, you think you have better
6	group that just came together and said,	6	qualifications than Dr. Smith-Bindman?
7	wow, we should use all this data, pool it	7	A. I can't answer that. I
8	together to address a rare type of	8	mean, I don't know. I mean, I would have
9	situation, which was done here.	9	to go through and look at all at all
10	Q. Did you do any of the	10	the stuff she's done. My only exposure
11	writing of this?	11	to her was the study that she's done, and
12	A. I I did not do the first	12	I don't think it was done particularly
13	draft, but I did go through and make	13	well.
14	revisions and comments.	14	Q. The one she's submitting for
15	Q. Isn't it true that you were	15	peer review?
16	identified as primarily the collection	16	A. Has she submitted it? Has
17	and assembly of data?	17	it been published? I wonder if it will
18	A. That was probably the	18	be published actually.
19	biggest role that I played in this study.	19	Q. Well, we'll have to see how
20	But I did yeah.	20	that goes.
21	Q. Isn't that kind of what	21	MR. TISI: I am this is
22	you isn't that kind of what you've	22	a this is a good time for
23	done in the meta-analysis that you've	23	lunch.
24	done, you're primarily the collection of	24	THE VIDEOGRAPHER: The time
	Page 279		Page 281
1	data?	1	is 12:49 p.m. Off the record.
2	A. No, that's not true.	2	
3	Q. Okay. So the other two	3	(Lunch break.)
4	would be ones that you did more than	4	
		*	
5	that, 47 and 58?	5	AFTERNOON SESSION
6	A. Well, you know	5 6	
6 7	A. Well, you know Q. 47 and 68. Excuse me.	5 6 7	THE VIDEOGRAPHER: We are
6 7 8	A. Well, you knowQ. 47 and 68. Excuse me.A. Yes, I mean I I I	5 6 7 8	THE VIDEOGRAPHER: We are back on the record. The time is
6 7 8 9	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I it's sort of it's a whole	5 6 7 8 9	THE VIDEOGRAPHER: We are
6 7 8 9 10	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you	5 6 7 8 9	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m.
6 7 8 9 10 11	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're	5 6 7 8 9 10	THE VIDEOGRAPHER: We are back on the record. The time is
6 7 8 9 10 11	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific	5 6 7 8 9 10 11	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.)
6 7 8 9 10 11 12	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative	5 6 7 8 9 10 11 12	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) BY MR. TISI:
6 7 8 9 10 11 12 13	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different	5 6 7 8 9 10 11 12 13	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I
6 7 8 9 10 11 12 13 14	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise.	5 6 7 8 9 10 11 12 13 14 15	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your
6 7 8 9 10 11 12 13 14 15	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise. Q. Do you think you're as	5 6 7 8 9 10 11 12 13 14 15	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your qualifications. I want to move onto a
6 7 8 9 10 11 12 13 14 15 16	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise. Q. Do you think you're as just have one do you think you have	5 6 7 8 9 10 11 12 13 14 15 16 17	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) EXAMINATION (Cont'd.) Output BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your qualifications. I want to move onto a new topic here.
6 7 8 9 10 11 12 13 14 15 16 17	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise. Q. Do you think you're as just have one do you think you have the same qualifications or better than	5 6 7 8 9 10 11 12 13 14 15 16 17	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your qualifications. I want to move onto a new topic here. I want to ask you about two
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6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise. Q. Do you think you're as just have one do you think you have the same qualifications or better than Dr. Smith-Bindman in doing a meta-analysis? MS. MILLER: Objection. I	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your qualifications. I want to move onto a new topic here. I want to ask you about two questions, two or three questions I think about Bradford Hill, and then we're going to move on to your analysis.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Well, you know Q. 47 and 68. Excuse me. A. Yes, I mean I I I it's sort of it's a whole collaborative thing. It's not like, you know, this is a service that you're trying to imply. It's a scientific endeavor that's done as a collaborative experience among various different scientists with different expertise. Q. Do you think you're as just have one do you think you have the same qualifications or better than Dr. Smith-Bindman in doing a meta-analysis? MS. MILLER: Objection. I think she testified that she	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	THE VIDEOGRAPHER: We are back on the record. The time is 1:27 p.m. EXAMINATION (Cont'd.) EXAMINATION (Cont'd.) BY MR. TISI: Q. Doctor, before lunch I want to finish up talking about your qualifications. I want to move onto a new topic here. I want to ask you about two questions, two or three questions I think about Bradford Hill, and then we're going to move on to your analysis. A. Okay.
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71 (Pages 278 to 281)

	Page 282		Page 284
1	cohort studies, just to kind of give you	1	being used.
2	a little bit of roadmap of where I'm	2	BY MR. TISI:
3	going. All right?	3	Q. And that's a that's a
4	Bradford Hill, we can both	4	methodologic flaw that you identified
5	agree, we've used the word criteria, but	5	that you think the plaintiffs' experts
6	we both agree that these are this	6	didn't adequately consider the that
7	is these are guidelines, correct?	7	that cohort studies are higher on the
8	A. I call it a framework.	8	evidentiary ladder than case-control
9	Q. Okay. And just to be clear,	9	studies, true?
10	you use the word criteria. And I've	10	A. I I believe that some of
11	actually used it in my in my	11	plaintiffs' experts just sort of, just
12	questions.	12	flat out say that case-controlled studies
13	When you use the word	13	have the higher evidence than the cohort
14	criteria, we really are talking about,	14	studies.
15	these are different considerations that	15	O. Let's talk about that for a
16	should be looked at when you're looking	16	moment. On Page 3, on your your
17	at the question of causation generally.	17	excuse me. On your conclusion, we it
18	A. Yeah. So Bradford Hill has	18	talks about the levels of evidence. Do
19	nine different considerations that one	19	you remember, you we we talked
20	should consider with within the	20	about that, that's Exhibit Number 2. You
21	framework of doing a Bradford Hill	21	actually mention it in your conclusion,
22	analysis.	22	right?
23	Q. Right. And just just to	23	A. So I'm sorry, where
24	be clear for the record, this isn't like	24	where
	Page 283		Page 285
1	a cookbook or a mathematical formula.	1	Q. It's the second sentence, it
2	Bradford Hill is is a balancing of the	2	says, "In assessing studies for the level
3	evidence using that that framework as	3	of evidence in the data."
4	a guideline?	4	A. Okay.
5	MS. MILLER: Objection.	5	Q. And we agreed
6	THE WITNESS: So I mean,	6	A. Yeah. So I used that word.
7	research is not a cookbook. But,	7	Yeah, I used that word.
8	you know, one can apply Bradford	8	Q. And we agreed before that
9	Hill I mean I think there's	9	the level of evidence you were talking
10	incorrect ways of applying	10	about was prospective case-controlled
11	Bradford Hill.	11	prospective cohort studies versus case
12	BY MR. TISI:	12	controls?
13	Q. Okay. And one of them,	13	A. No, no, no. That's not
14	you you and this leads into my next	14	correct here.
15	question is, you believe that there are	15	Q. Okay.
16	levels of evidence that trump other	16	A. This here, as I'm looking at
17	levels of evidence, generally speaking?	17	the evidence in totality across
18	MS. MILLER: Objection.	18	everything I looked at.
19	THE WITNESS: In the	19	Q. Okay. But below in the
20	epidemiology literature, it's	20	on Page 53 you say, "Cohort studies
21	pretty much I think agreed upon	21	provide stronger evidence than do
22	that there are there are	22	case-control studies."
23	different levels of evidence based	23	It's near the like five
	upon what type of study design is	24	lines

72 (Pages 282 to 285)

	Page 286		Page 288
1	A. "Cohort studies provide	1	Q. And under that are
2	stronger evidence do" "than do	2	case-control studies?
	case-control studies."	3	A. Yes.
4	That's stated there, yes.	4	Q. And under that are case
5	Q. Okay. And you think that's	5	reports and case series?
6	a general epidemiologic principle,	6	A. Yes.
7	correct?	7	Q. Okay. And you have kind of
8	A. I do.	8	bright lines between the two, to really
9	Q. And you repeat that	9	differentiate for the reader, that there
	repeatedly throughout your report,	10	is these are established principles,
11	correct?	11	correct
12	A. I I may state it several	12	MS. MILLER: Objection.
13	times.	13	BY MR. TISI:
14	Q. Okay. Let's let's look	14	Q that that cohort
15	at them.	15	studies are are better than
16	First of all, if you go to	16	case-control studies, are better than
	Page 4 of your report, you talk about the	17	case reports and case series, et cetera?
18	levels of evidence with increasing	18	MS. MILLER: Objection.
19	reliability. It says, on "Figure 1	19	THE WITNESS: I I don't
20	illustrates the level of evidence with	20	think I said better. And I think
	each trial design with increasing	21	the lines are there just just
22	evidence moving up the pyramid."	22	so there has there doesn't have
23	Do you see that?	23	to be lines there.
24	A. I do see that.	24	And what it's trying to show
	Page 287		Page 289
1	Q. And then you have a pyramid?	1	is the level of evidence contained
2	A. I do.	2	in those. I don't I mean, I
3	Q. Okay. And what is the	3	don't know what you mean by
4	purpose of this illustration that you	4	better.
5	included in your report on Page 4?	5	BY MR. TISI:
6	A. Just just to to give a	6	Q. Well, okay. Cohort studies,
7	visual for how the different study	7	according to your chart, are more
8	designs compared to each other in terms	8	reliable than case-controlled studies?
9	of of the level of evidence that	9	A. Again, they they have a
10	epidemiologists believe are are	10	higher level of evidence. I don't I
11	conveyed in each of the different types	11	don't know if I would say reliable is the
12	of studies.	12	same as level of evidence.
13	Q. And below randomized	13	Q. Okay. Now, you don't have
14	controlled trial there's randomized	14	any citation for this, for this chart, do
15	and there's meta-analysis, and by that	15	you?
16	you mean meta-analysis of controlled	16	Did you create this or is
17	trials, correct?	17	this from some other place?
18	A. Yes.	18	A. I I have seen this in
19	Q. Okay. And then underneath	19	numerous, numerous different places, but
20	are RCTs?	20	I made this particular figure by myself.
21	A. Mm-hmm.	21	Q. Okay. So there's no
22	Q. Okay. And under that are	22	citation for this?
23	cohort studies?	23	A. Not in this document, but
24	A. Yes.	24	there is in the epidemiology literature.

73 (Pages 286 to 289)

	Page 290		Page 292
1	Q. Okay. Well, there's no	1	you know, how the P-values were
2	citation for this, correct?	2	were calculated because it's
3	MS. MILLER: Objection.	3	it's sort of a given
4	Asked and answered.	4	BY MR. TISI:
5	BY MR. TISI:	5	Q. Okay.
6	Q. Because what I'm going to	6	A knowledge.
7	ask I'm going to ask you questions	7	Q. On Page 7 of your report.
8	about that, but you did not provide a	8	And I'm just going to read a couple
9	citation for Figure 1	9	places where you make this point.
10	MS. MILLER: Objection.	10	On Page 7, 3.3, you say,
11	BY MR. TISI:	11	"Generally in my experience, prospective
12	Q where you got that	12	cohort studies yield a higher level of
13	statement from?	13	evidence than case-control studies."
14	MS. MILLER: I'm sorry, I	14	That's the first sentence
15	just always think you're done with	15	in
16	your question so I object, and	16	A. That is what it says there.
17	then you keep going. That's now	17	Q. Okay. Could you just put a
18	three questions and it's one	18	line next to that so we can we may
19	question. We're having the same	19	·
20		20	come back to that. Could you just put
21	ongoing issue that we had before.	21	a May Lymita?
22	Objection to all three parts	22	A. May I write?
23	of that question. BY MR. TISI:	23	Q. Yeah, you can write on that. MS. MILLER: I think she
		l .	
24	Q. Okay. Doctor	24	can
	Page 291		Page 293
1	MS. MILLER: So which	1	BY MR. TISI:
2	question is	2	Q. Yeah, would you, please?
3	BY MR. TISI:	3	Yes, it's an exhibit. Thank you.
4	Q. Doctor, do you have a	4	MS. MILLER: Why don't we
5	citation to this chart?	5	just use a sticky?
6	A. I made the chart up myself.	6	MR. TISI: No, because I'm
7	And and it is just an underlying	7	going to I want a record of
8	epidemiological principle, so it it	8	what we did.
9	doesn't have a citation. It would be	9	BY MR. TISI:
10	like cite citing what a T test is.	10	Q. So on page and there's no
11	Q. Okay.4?	11	citation
12	A. It's sort known through the	12	MS. MILLER: She is not
13	literature as to this is	13	creating an exhibit here.
14	Q. Okay. So your so your	14	MR. TISI: Yeah, she is.
15	your view if it's a general principle,	15	MS. MILLER: No.
16	you don't have to cite something to	16	MR. TISI: Yeah, she is.
17	support it?	17	MS. MILLER: Well, I am
18	MS. MILLER: Objection.	18	objecting to that.
19	THE WITNESS: You know,	19	MR. TISI: You can object to
20	again, it's it's a general	20	it.
21	principle and, you know, and when	21	MS. MILLER: If you want
22	one is talking about odds ratios	22	stickies she can put stickies.
23	or P-values and things like that,	23	MR. TISI: You can object to
24	we, you know, we're not citing,	24	it. You can object to it, and

74 (Pages 290 to 293)

	Page 294		Page 296
1	we'll ask the we can take a	1	going off of Figure 1, which is a
2	break and call the judge if you	2	generally accepted principle in
3	want to do that.	3	epidemiology.
4	MS. MILLER: Any time you	4	Q. Okay. But the answer there
5	want. You seem to be threatening	5	is there's no citation there, right?
6	that a lot.	6	MS. MILLER: Objection.
7	MR. TISI: Do you want to do	7	THE WITNESS: There's no
8	that?	7 8 9	citations for many things that are
9	MS. MILLER: It's up to you.	9	general sort of principles of
10	MR. TISI: Do you want to do	10	epidemiology or other facts.
11	that? Because I'm happy to	11	BY MR. TISI:
12	because I would like to draw on	12	Q. Please go to Page 26,
13	that exhibit there where she	13	please.
14	MS. MILLER: Well, she's	14	A. There's no citation there.
15	already drawn it. I will see what	15	I take it back. But I do have citations
16	else you ask of her.	16	in and if you give me a minute to
17	BY MR. TISI:	17	look, I can
18	Q. On Page 17, second full	18	Q. No, I want to see
19	paragraph.	19	A find citations where
20	A. Yes.	20	there's a higher level of evidence
21	Q. Does it say does it say,	21	Q. I'm going through every
22	"When the results across study designs	22	place where you've said it. And I want
23	are not consistent, i.e., case-control	23	to put this, Doctor. First, follow me.
24	study reports a statistically significant	24	MS. MILLER: Chris, excuse
	Page 295		Page 297
1	association, but cohort studies do not,	1	me.
2	the study with the accepted higher level	2	MR. TISI: I ask I'm
3	of evidence is the cohort study because	3	asking the questions.
4	it eliminates bias such as recall bias"?	4	BY MR. TISI:
5	A. That's what it states.	5	Q. Is there a citation after
6	Q. Okay. Can you put a little	6	that statement? The answer is no.
7	star next to that, please?	7	The next one, on Page 26, do
8	MS. MILLER: A star.	8	you see that it says, "It is well
9	BY MR. TISI:	9 10	established as discussed above that there
11	Q. Or a whatever. So I want	10	are more potential or confounding case-control studies compared to
12	to be able to come back to it. Could you do that, ma'am?	12	prospective cohort studies since the
13	A. I'll remember where it is.	13	prospective cohort studies are not prone
14	Q. No, could you just put a	14	to participant selection, recall bias
15	please, would you do what I've asked,	15	with respect to exposure, which is why
16	please?	16	they're considered to yield stronger
17	MS. MILLER: I have a	$\begin{vmatrix} 17 \\ 17 \end{vmatrix}$	level of evidence than case-control
18	standing objection to this. I	18	studies."
19	think this is improper.	19	Do you see that?
20	MR. TISI: You can object.	20	A. On Page 26? No, I
21	BY MR. TISI:	21	Q. Second sentence of the first
22	Q. On Page 26 and of course	22	full paragraph. "It is well
23	you do not have a cite to that?	23	established"
24	A. As I mentioned, this is	24	A. Which it says, "As discussed

75 (Pages 294 to 297)

	Page 298		Page 300
1	above." So I'm going to go and look at	1	A. "Cohort studies yield a
2	the "as discussed above" for the	2	higher level of evidence. Hill observed,
3	citations.	3	'I would put myself at a good deal of
4	So I have a citation to a	4	weight upon similar results reached in
5	book called case-control studies. And	5	quite different ways, i.e., prospectively
6	actually my references are transposed	6	and retrospectively."
7	there.	7	Q. But they're not you can
8	That discusses sort of the	8	have prospective case-control studies and
9	level of evidence.	9	you can have retrospective case-control
10	Q. Okay. So you think that's	10	studies. You could have prospective
11	the citation. What is the name of that?	11	A. How can you have prospective
12	What is the name of that one?	12	case-control studies?
13	A. So it's listed as six. But	13	Q. Actually, you're right. You
14	it should be seven there, "Case-Control	14	can have prospective and retrospective
15	Studies: Design, Conduct and Analyses."	15	cohort studies, correct?
16	Q. Okay. I'll look that up.	16	A. It depends upon how you
17	Let's go to page	17	define it.
18	A. And also I also think I	18	Q. He didn't talk about
19	have more. Oh, it's in the meta-analyses	19	case-controls and cohorts, did he?
20	that we were talking about. And so	20	A. I don't know. I'll have to
21	there's a Citation 23. And I say, "So	21	look up Bradford Hill.
22	this is because, due to the effects of	22	Q. Okay. But you do say,
23	confounding and bias, observational	23	without citation, "Cohort studies yield a
24	studies may produce estimates that	24	higher level of evidence," correct, on
	Page 299		Page 301
1	deviate from a true causal."	1	Page 28?
2	That's that's	2	A. There's no explicit citation
3	observational studies in general.	3	on for the sentence that you read.
4	Q. But nothing saying that it's	4	Q. Let's go to Page 35. Third
5	a higher level of evidence? I'm looking	5	paragraph, last sentence. "Now, the
6	for a citation that says cohort studies	6	cohort studies observed a dose-response
7	are a higher level of evidence as a	7	relationship. Cohort studies provide a
8	general rule than case-control studies.	8	higher level of evidence than do
9	A. So again, I think it is	9	case-control studies."
10	implied throughout.	10	(Brief teleconference
11	Q. It's implied, but it's not	11	interruption.)
12	cited. And I'm looking for a citation to	12	THE WITNESS: Yes, there's
13	that. It's not only implied. Actually,	13	no citation after that particular
14	you come right out and say it several	14	sentence, I agree.
15	times.	15	BY MR. TISI:
16	A. Yes.	16	Q. Okay. So in this one
17	Q. Okay. So let's go to Page	17	there's no citation to cohort studies
18	28, last paragraph, last sentence.	18	providing a higher level of evidence than
19	A. Yes.	19	do case-control studies, true?
20	Q. It says, "Cohort studies	20	A. There's no citation after
21	yield a higher level of evidence." No	21	that particular sentence. You are
22	citation for that either?	22	correct.
23	A. I'm sorry. Last sentence?	23	Q. Okay. And you have a
24	Q. Cohort studies. Page 28.	24	statement in the conclusion that cohorts

76 (Pages 298 to 301)

	Page 302		Page 304
1	are better than case-control, and that	1	conclusion, rely very heavily on the
2	also doesn't have a citation, correct?	2	concept that, as a general rule, cohort
3	A. What conclusion?	3	studies are better than case
4	Q. On the conclusion on Page	4	case-control studies; is that true?
5	53.	5	MS. MILLER: Objection.
6	A. I do not have a citation	6	THE WITNESS: It's not a
7	after that sentence.	7	concept. It is a generally
8	Q. Now, on Page 45, in your	8	accepted and well accepted
9	criticism of Dr. Smith-Bindman, you say,	9	principle of epidemiology that
10	in the middle of the page, "As I said	10	there is more evidence in cohort
11	above there is evidence in the literature	11	studies than there is in
12	that cohort studies provide less biased	12	case-control studies because they
13	information than case-control studies,	13	eliminate confounding.
14	and I have not found instance where	14	And I'm just I need to
15	the instances where the opposite is	15	look, and I'm sure there are some
16	argued."	16	citations here.
17	Do you see that?	17	BY MR. TISI:
18	A. Mm-hmm.	18	Q. Well, the only cite you
19	Q. Okay. And there's no	19	mention are are it's Number 7 in
20	citation to that as well, right?	20	your report, the case-control studies
21	A. Well, if I didn't find any	21	A. Right, but buried within
22	instances where that has been showing,	22	some of these other studies there are
23	there wouldn't be citations.	23	statements such as, you know, it was
24	Q. Did you look?	24	thought that oral contraceptives, you
	Page 303		Page 305
1		1	
1	A. I did.	1	know, cause breast cancer based on
2	Q. You did?	2	case-control studies, but then when
3	A. Yeah. I have not seen a	3	cohort studies were done, the opposite
4	study that has said there is a higher	4	was found due to the fact that they are a
5	level of evidence in case-control studies	5	lower level of evidence and biases and
6	than there is in cohort studies as a	6	confounding
7	whole.	7	Q. Are there other
8	Q. Actually, I didn't	8	A in case-control studies.
9	actually, I didn't say higher level. I	9	Q. I apologize.
10	said that cohort studies are as a whole	10	Are there other instances
11	better than case-control studies.	11	where case-control studies have found the
12	A. No. Can what was that	12	real cause that cohorts haven't?
13	the question?	13	A. I don't know off of the top
14	Q. The statement is, "I have	14	of my head.
15	not found the opposite to be true."	15	Q. But you know full well that
16	A. Exactly. And I don't have a	16	the current view in epidemiology is that
17	citation for "I have not found the	17	evidentiary period does not provide a
18	opposite to be true," because because	18	bright line between between
19	there is no literature that says the	19	case-control and cohorts, don't you?
20	opposite is true.	20	MS. MILLER: Objection.
21	Q. Okay. The truth is that	21	THE WITNESS: Can you show
22	your methodology, your opinions and	22	me where where getting you're
100			
23 24	we've gone through several places in your report rely very heavily on, and your	23 24	that information and why I should know full well?

77 (Pages 302 to 305)

	Page 306		Page 308
1	BY MR. TISI:	1	for the record what you wrote in Viagra?
2	Q. Let's start with your own	2	A. Yeah, this is this is
3	statement in the Viagra litigation.	3	very abbreviated. Because I see I have a
4	Okay.	4	section on randomized clinical trials
5	Let's let me show you	5	right here
6	what I have marked as Exhibit Number 21.	6	Q. I'm asking you what you
7	(Document marked for	7	read can you read can you read what
8	identification as Exhibit	8	you wrote in Viagra?
9	Ballman-18.)	9	MS. MILLER: Objection.
10	BY MR. TISI:	10	THE WITNESS: Read what?
11	Q. Do you remember do you	11	BY MR. TISI:
12	remember	12	Q. Read where it says levels of
13	MR. SOILEAU: This is not	13	evidence. Section B. There's a full
14	going to be 21 in this deposition.	14	paragraph under levels of evidence.
15	MR. TISI: I'm sorry. For	15	Could you read what it says?
16	the record, this is 18.	16	A. Sure. "Cancer epidemiology
17	BY MR. TISI:	17	attempts to identify risk factors that
18	Q. And you have a do you	18	are causative agents of cancer. Knowing
19	recall having a section in your Viagra	19	what causes a cancer may lead to
20	report which talks about levels of	20	——————————————————————————————————————
21	evidence?	21	therapies that benefit patients and/or
22		22	strategies to minimize the exposure to a risk. There are different levels of
23	A. Not off of the top of my head. I need to see it.	23	
		l .	evidence for determining whether a factor
24	MS. MILLER: Is this the	24	is causal based on the underlying study
	Page 307		Page 309
1	whole report or just a portion of	1	design. A recognized ranking of common
2	the report?	2	study designs from the greatest level of
3	MR. TISI: It's a portion of	3	evidence to lowest is, one, randomized
4	the report.	4	clinical trials, two, cohort and
5	MS. MILLER: Yeah, I don't	5	case-control studies, and three, case
6	think that's right. I think that	6	reports and case series."
7	you need to give her the whole	7	Then I go on and
8	report.	8	Q. And just just
9	MR. TISI: You can object	9	A I list Number 1
10	you know, you haven't even looked	10	Q. I just asked you I simply
11	at it.	11	just
12	MS. MILLER: Would you like	12	A. I I'm not finished.
13	a whole report?	13	Please, can you let me finish. Please.
14	THE WITNESS: I would like	14	Q. No. I asked you to read in
15	the whole report.	15	the record. Your lawyer if they want to
16	MR. TISI: Okay. Let me	16	can do that. Okay? And I'm going to
17	you may like it. You can use your	17	MS. SHARKO: No, she has the
18	time to do that.	18	right to finish her answer,
19	BY MR. TISI:	19	Mr. Tisi, and you know that
20	Q. Doctor, I'm there's a	20	MR. TISI: Who is who
21	section in here, full paragraph on levels	21	is she has a right I asked
22	of evidence. Do you see that?	22	her to read the paragraph.
23	A. Yes. There is a yes.	23	MS. SHARKO: You know that.
24	Q. Okay. Would you please read	24	MR. TISI: That is to my

78 (Pages 306 to 309)

	Page 310		Page 312
1	knowledge	1	Have you looked in textbooks to see
2	MS. SHARKO: What kind of	2	whether that is true?
3	question is that? A reading test?	3	A. Yes.
4	MR. TISI: I asked yes.	4	Q. Okay. I'm going to show you
5	That's what I asked her to do, and	5	Dr. Rothman's textbook textbook on
6	she read it. Thank you.	6	on epidemiology.
7	THE WITNESS: But this	7	A. The whole textbook?
8	misrepresents what this	8	Q. I'm showing you the entire
9	MS. SHARKO: No, but she has	9	chapter. The entire chapter.
10	the right	10	A. And the table of contents?
11	THE WITNESS: this	11	MR. TISI: I can give
12	paragraph is saying, because it's	12	actually, I can give you the whole
13	incomplete and taken out of	13	book. Let's do this.
14	context.	14	BY MR. TISI:
15	BY MR. TISI:	15	Q. And if you feel like you
16	Q. I'm going to	16	need to look at the book, I'm happy to do
17	A. And I see that you've	17	it.
18	provided it says Number 1, randomized	18	MS. MILLER: I don't think
19	clinical trials, and then and then it	19	there's any reason to take that
20	goes over on the next page. And then it	20	tone with the witness
21	stops because I'm sure I have a section	21	MR. TISI: I mean, you know,
22	on on case-control studies and a	22	honestly
23	section on cohort studies, and it's	23	MS. MILLER: We've been very
24	consistent with what I say here.	24	polite in these depositions. This
	Page 311		Page 313
1	Q. But you lump them	1	is the first deposition that I'm
2	A. They are lumped together	2	aware where the where the
3	Q. But you Doctor, this	3	lawyer has been so rude to the
4	isn't this really isn't an argument.	4	witness.
5	I'm asking you whether for the purposes	5	MR. TISI: I don't think I'm
6	of your Viagra case, where you describe	6	being rude at all. I don't think
7	the level of evidence, instead of five	7	I'm being rude at all.
8	levels, you describe three.	8	Okay.
9	A. I think that is a	9	MS. SHARKO: Maybe not by
10	mischaracterization	10	your standards.
11	Q. Okay.	11	MR. TISI: Certainly not by
12	A because this is not	12	your standards.
13	complete.	13	MS. SHARKO: I would
14	Q. All right.	14	disagree with that.
15	A. That they are put together	15	BY MR. TISI:
16	because they are both observational	16	Q. Okay. Chapter I have the
17	studies, and then I'm sure I have a	17	book. I'll give you the book.
18	separate section that talks about the	18	For the record, I'm going to
19	different aspects of clinical of	19	have this marked as Exhibit Number 19.
20	case-control studies and cohort studies,	20	(Document marked for
21	and say essentially the same thing	21	identification as Exhibit
22	because it's an accepted underlying	22	Ballman-19.)
23	epidemiology principle.	23	BY MR. TISI:
24	Q. So let me ask you this.	24	Q. I'm looking at Chapter 8.

79 (Pages 310 to 313)

	Page 314		Page 316
1 1	And I'm going to give you the exhibit	1	the next paragraph. It says, "Cohort
	right in front of you. And you can look	2	studies are not immune from problems
	at the book if you'd like.	3	often thought to be particular with
4	Doctor?	4	case-control studies. For example, while
5	A. Yes, I'm I'm	5	a cohort study may gather information on
6	Q. I have I'd like you to	6	exposure for an entire source population
	look at the exhibit. You can look at the	7	at the outset of the study, it still
	book if you need to	8	requires tracing subjects to ascertain
9	A. I'm sorry, did did you	9	exposure variation and outcomes."
	hand it to me?	10	Do you see that?
11	Thank you.	11	A. So I'm sorry. I'm trying to
12	Q. Now, this is Chapter 8.	12	take in a lot of information. I'm sorry.
	It's called "Case-Control Studies."	13	I'm going to have to ask you to rephrase.
14	Do you see that?	14	Q. Okay. Does he not say,
15	A. It does say case-control	15	"Cohort studies are not immune from
	studies.	16	problems often thought to be particular
17	Q. And the first	17	to case-control studies"?
18 ı	paragraph introduces the concept. It	18	A. That's what that sentence
	says, "In this chapter, we will review	19	says.
	case-control designs and contrast their	20	Q. Next sentence, he gives an
	advantages and disadvantages with cohort	21	example. "For example, while cohort
	designs."	22	studies may gather information on
23	Do you see that?	23	exposure for the entire source
24	A. I'm sorry. Which page?	24	population, at the outset of the study it
	Page 315		Page 317
1	Q. First page. The first	1	still requires tracing of subjects to
2 1	paragraph just introduces the topic.	2	ascertain exposure variation and
3	A. Yes.	3	outcomes."
4	Q. Last sentence says, "In this	4	Do you see that?
5 (chapter we will review case-control to	5	A. Yes, it does say that.
6 8	study designs and contrast their	6	MS. MILLER: Do you want to
7 8	advantages and disadvantages to cohort	7	give her the time to actually read
8 (designs."	8	this, instead of plucking out
9	Do you see that?	9	sentences from it?
10	A. I see that.	10	THE WITNESS: Yeah, I
11	Q. Okay. The next sentence in	11	mean
	the first paragraph. "Conventional	12	MS. MILLER: You are
	wisdom about case-control studies is that	13	plucking out one sentence from a
	they do not yield estimates of effect	14	paragraph.
	that are as valid a measure obtained from	15	BY MR. TISI:
	cohort studies. This thinking may	16	Q. I'm happy to do I'm just
	reflect a common misunderstanding in	17	asking whether where it says do you
	conceptualizing case-control studies	18	agree with that statement?
	which will be clarified later."	19	MS. MILLER: But she has to
20	Do you see that?	20	read the whole thing.
21	A. I I see that, you read	21	THE WITNESS: But I don't
	that correctly.	22	know.
23	Q. Okay. And then he	23	MR. TISI: No, she doesn't.
24 (describes, so if you want to go down to	24	I'm asking her whether she agrees

80 (Pages 314 to 317)

	Page 318		Page 320
1	with that statement.	1	identification as Exhibit
2	BY MR. TISI:	2	Ballman-20.)
3	Q. Do you agree that, "Cohort	3	BY MR. TISI:
4	studies may gather information on	4	Q. It's entitled "Six
5	exposure for an entire source population	5	Persistent Research Misconception."
6	at the outset of the study and still	6	Do you see that?
7	requires tracing of subjects to ascertain	7	A. Yes, I do see that.
8	exposure variations and outcome. If the	8	Q. Have you seen this article
9	success of this tracing is related to the	9	before?
10	exposure and the outcome, the resulting	10	A. You know, I think in my
11	selection bias will behave analogously to	11	career I have seen this article before.
12	the often raised concern of case-control	12	Q. Okay. And again,
13	studies."	13	Dr. Rothman you would agree, he's the
14	Do you agree with that or	14	founder of the Journal of Epidemiology.
15	disagree with that?	15	You understand that, correct?
16	MR. LOCKE: Objection.	16	MS. MILLER: Objection.
17	THE WITNESS: I cannot say	17	THE WITNESS: I have no idea
18	just off the fly like this because	18	if he's the founder of the Journal
19	I have to see where they're going	19	of Epidemiology.
20	with this, if they are just sort	20	BY MR. TISI:
21	of setting up, you know, why are	21	Q. This is a fairly well known
22	people doing case-control studies	22	article, correct?
23	in the first place, because they	23	A. I don't know that either.
24	have, like, lower level of	24	Q. Okay. Well, let's look at
	Page 319		Page 321
			1490 321
1	evidence than cohort studies. I	1	
1 2	evidence than cohort studies. I just I can't really comment if	1 2	Misconception Number 1, because actually
2	just I can't really comment if	2	Misconception Number 1, because actually as opposed to reading the whole article,
	just I can't really comment if I agree or disagree with that.	2	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you
2 3 4	just I can't really comment if I agree or disagree with that. BY MR. TISI:	2 3 4	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but
2 3 4 5	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or	2 3 4 5	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read
2 3 4	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement.	2 3 4 5 6	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there.
2 3 4 5 6	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited	2 3 4 5 6 7	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the
2 3 4 5 6 7 8	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple	2 3 4 5 6 7 8	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number
2 3 4 5 6 7	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out	2 3 4 5 6 7	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please.
2 3 4 5 6 7 8 9	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an	2 3 4 5 6 7 8 9	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He
2 3 4 5 6 7 8 9 10	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can	2 3 4 5 6 7 8 9 10	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number
2 3 4 5 6 7 8 9 10 11	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer.	2 3 4 5 6 7 8 9 10 11	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study
2 3 4 5 6 7 8 9 10	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps.	2 3 4 5 6 7 8 9 10 11 12	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the
2 3 4 5 6 7 8 9 10 11 12	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article	2 3 4 5 6 7 8 9 10 11 12 13	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking
2 3 4 5 6 7 8 9 10 11 12 13	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort
2 3 4 5 6 7 8 9 10 11 12 13 14 15	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic. MS. MILLER: Are we done	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being the least reliable."
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic. MS. MILLER: Are we done with this exhibit? MR. TISI: For now. You can put it to aside. You can	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being the least reliable." Q. Okay. He calls that a misconception, does he not? A. You know, I don't know what
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic. MS. MILLER: Are we done with this exhibit? MR. TISI: For now. You can put it to aside. You can leave the book there if you like	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being the least reliable." Q. Okay. He calls that a misconception, does he not? A. You know, I don't know what he means by validity, and I don't know
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic. MS. MILLER: Are we done with this exhibit? MR. TISI: For now. You can put it to aside. You can leave the book there if you like to. You can refer to it if you	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being the least reliable." Q. Okay. He calls that a misconception, does he not? A. You know, I don't know what he means by validity, and I don't know what he means by least reliable. I'm
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	just I can't really comment if I agree or disagree with that. BY MR. TISI: Q. Okay. You can't agree or disagree with that statement. A. Well, with the limited information I'm given a couple sentences that I'm asked to look at out of an entire chapter that comes out of an entire book, I do not feel that I can give a complete and truthful answer. Q. Let's see if this helps. Okay. I'm going to show you an article that Dr. Rothman wrote on this very topic. MS. MILLER: Are we done with this exhibit? MR. TISI: For now. You can put it to aside. You can leave the book there if you like	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Misconception Number 1, because actually as opposed to reading the whole article, which I'm more than happy to have you take a look at if you'd like to, but Misconception Number 1, would you read that? He puts a bullet point there. Would you please tell the judge and the jury what he says is Misconception Number 1. Read that, please. A. I'll read what he says. He says, "The misconceptions are, number one, there is a hierarchy of study designs, randomized trials provide the greatest validity" and he's talking validity there "followed by cohort studies, with case-control studies being the least reliable." Q. Okay. He calls that a misconception, does he not? A. You know, I don't know what he means by validity, and I don't know

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	Page 322		Page 324
1	the same thing.	1	second-to-last paragraph on the first
2	Q. Okay. Let's see what he	2	column.
3	actually says. Does he say in the	3	A. Okay. Thank you.
4	first paragraph he talks about RCT, first	4	Q. It says, "Discrepancies
5	two paragraphs. Let's talk about the	5	between cohort studies and case-control
6	next paragraph.	6	studies should not be explained away
7	It says, "Both cohort and	7	superficially by a presumed validity
8	case-control studies will yield valid	8	advantage for cohort studies over
9	results when properly designed and	9	case-control studies."
10	carried out."	10	Does he not say that?
11	Do you see that?	11	A. That's what is written
12	A. Where it is again? Again,	12	there.
13	you're making me come you know, go	13	Q. Okay. And if you go
14	through a whole lot of information and	14	A. And I want to point out
15	SO	15	and he goes on and says, "Properly
16	Q. Well, you know, I'm going to	16	designed case-control studies will
17	tell you, if you feel like you need to	17	produce the same results as properly
18	take a look at this entire misconception,	18	designed cohort studies."
19	feel free to do it.	19	So what that means is the
20	A. So, I mean, I'm surprised	20	studies need to not have recall bias and
21	I just want to point out a couple things	21	they need not to have selection bias,
22	and	22	which is almost theoretically impossible
23	Q. No, I don't there's no	23	to do.
24	question pending. You said you wanted to	24	Also, this is the only
	Page 323		Page 325
1	take a look at it. Feel free to take a	1	author out there that has written on
2	look at it, and I'll ask you questions	2	this, is one textbook, same author, one
3	about it.	3	paper, same author. And the author goes
4	A. Okay.	4	on to, say, "These misconceptions have
5	Q. I want to be fair.	5	been perpetuated in journals, classrooms
6	A. All right. Go ahead.	6	and textbooks."
7	Q. Does he not say, in the	7	And so I could do the same
8	second paragraph, "Both cohort studies	8	thing and find a vast majority more
9	and case-control studies will yield a	9	papers and textbooks and so forth that
10	valid result when properly designed and	10	would dispute that.
11	carried out"?	11	Q. But you didn't, Doctor. You
12	A. That's what he says.	12	didn't even cite it for any for any of
13	Q. Okay. Now, I'm going to	13	the times. We went through your report,
14	read he says, "Similarly" on the	14	and you didn't cite one instance. You
15	next page, second-to-last paragraph,	15	said one article that was in a different
16	"Similarly, discrepancies between cohort	16	place, case-control case-control
17	studies and case-control studies should	17	textbook. And I'm going to look that up.
18	not be explained away superficially by a	18	Okay. But other than that,
19	presumed validity advantage for cohort	19	you had no citations whatsoever, true?
20	studies over case-control studies."	20	MS. MILLER: Objection.
21	True?	21	THE WITNESS: I disagree
22	A. I'm sorry. Where are you	22	with that, because if we go back
23	reading from again?	23	to to my report, I have I
24	Q. The next the	24	have like real evidence in the

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	Page 326		Page 328
1	literature that shows that	1	I'm allowed to to give the
2	case-control studies do, and	2	complete truth.
3	cohort studies do not when you	3	BY MR. TISI:
4	do have the opportunity to do a	4	Q. Okay.
5	randomized trial, it comes up with	5	A. I feel like we're doing half
6	a completely different conclusion.	6	truths here.
7	And I have several	7	Q. Okay. I'm perfectly happy
8	references that show that. And	8	to stand on this article.
9	that's real life data. That's not	9	Let me let me look at the
10	purporting, you know, evidence	10	last sentence. "When properly designed
11	against what's a generally	11	case-control studies can achieve" "can
12	accepted epidemiology principle.	12	achieve the same excellent validity as
13	BY MR. TISI:	13	properly designed cohort studies, whereas
14	Q. Let's look at the last	14	poorly designed trial can be unreliable.
15	sentence in this section. It says, "When	15	The type of study should be not taken as
16	properly designed"	16	a guide to the study's validity."
17	A. And, you know, this says	17	Does he not say that?
18	it's a review too. It doesn't say it's a	18	A. He does say that there.
19	research article. This is, like, I think	19	¥
20		20	Q. Okay. Thank you. Do you agree or disagree?
21	someone's opinion. I mean	21	
22	Q. Like your report. Like your	22	A. I disagree with his his
23	report. Your report is your opinion.	23	entire thing. I think for individual studies there could be an individual
	MS. SHARKO: Don't interrupt		
24	the witness.	24	case-control study that might be better
	Page 327		Page 329
1	BY MR. TISI:	1	designed than an individual cohort study.
2	Q. Your report is your opinion,	2	But I think as a body of
3	right?	3	evidence as a whole, it is accepted as a
4	MS. MILLER: Objection.	4	principle in epidemiology literature,
5	THE WITNESS: Those are two	5	that what comes out of case-control
6	different things.	6	studies in total and what comes out of
7	BY MR. TISI:	7	cohort studies in total, are both under
8	Q. One is for litigation, and	8	randomized trials, and cohort studies
9	one isn't?	9	have less biases in terms of selection
10	MS. MILLER: Objection.	10	biases and recall biases than do
11	BY MR. TISI:	11	case-control studies, which is why they
12	Q. Dr. Ballman, you know,	12	have a higher level of evidence.
13	you're offering a lot of commentary of	13	Q. It has other biases too.
14	things that I haven't asked. Okay?	14	For example, if you only ask the
15	I'm asking you, first of	15	patient if the cohort study is not
16	all, this is published in the peer	16	designed to to look at a particular
17	reviewed literature, correct?	17	question, and you only ask a person once
18	MS. MILLER: Objection.	18	in 25 years whether they use talcum
19	MR. LOCKE: Objection.	19	powder, that can change over time,
20	THE WITNESS: So I think I'm	20	correct?
21	trying to give a complete and	21	A. So so what's the
22	truthful answer which I swore to	22	question?
23	at the beginning of the	23	Q. The question is: That's a
		24	bias as well, that would bias towards the
24	deposition, and I don't feel like	1 2.4	DIAS AS WELL THAT WOLLD DIAS TOWARDS THE

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	Page 330		Page 332
1	null?	1	could could make comment on them.
2	MS. MILLER: Objection.	2	Q. In all the cohort studies
3	BY MR. TISI:	3	regarding talc, the patients were asked
4	Q. If a patient, in a	4	on only one occasion whether they used
5	hypothetical cohort study, that was not	5	talc early on in the study, correct?
6	designed specifically to look at whether	6	A. So the cohort
7	talc causes ovarian cancer, and that	7	MR. LOCKE: Objection.
8	patient and it's a 20-year study, and	8	THE WITNESS: So the cohort
9	upon enrollment they are asked one time	9	studies in talc were done in in
10	about their exposure to tale, is it	10	cohorts of women that tended to be
11	possible that over two decades, the	11	older. And and I can go
12	patient could change their behavior?	12	through the different cohorts.
13	MS. MILLER: Objection.	13	BY MR. TISI:
14	There were three questions in	14	Q. I'm asking I didn't ask
15	there. I objected to the first.	15	you to to recite me. I'm asking you,
16	MR. TISI: There's not	16	in each of those studies, the women
17	that's fine. You can object	17	enrolled in those studies were asked
18	you can object to the question.	18	about talc exposure on one occasion,
19	MS. MILLER: Okay. I don't	19	true?
20	know what the question is.	20	MR. LOCKE: Objection.
21	MR. TISI: That's fine.	21	THE WITNESS: So I was
22	THE WITNESS: Can you ask	22	trying and your previous
23	one by one what what the	23	question I think was a little bit
24	BY MR. TISI:	24	different and I was trying to
	Page 331		Page 333
1	Q. You understand that there	1	answer that before you interrupted
2	are biases that are also inherent in	2	me with with the second
3	cohort studies as well?	3	question, and so
4	A. I I think I'm pretty	4	BY MR. TISI:
5	pretty clear that I think all	5	Q. Okay. Then let me withdraw
6	observational studies have some sort of	6	the question.
7	biases in them.	7	I'm going to ask you, can
8	Q. Right. And you have to	8	you name for me a cohort study
9	consider all of them, correct?	9	MS. MILLER: You just
10	A. All of what?	10	interrupted her again. She was
11	Q. All the biases and all the	11	like literally when she says
12	different kinds of studies.	12	"and so," you start talking. Let
13	A. You have to consider I	13	her finish her sentences.
14	I looked I don't know what that means.	14	MR. TISI: I'm going to
15	Q. You don't dismiss biases in	15	ask I'm going to ask I
16	cohort studies because they happen to be	16	withdrew the question.
17	cohort studies, right?	17	BY MR. TISI:
18	A. Again, it depends upon what	18	Q. My question is this
19	the individual studies are and the	19	MS. MILLER: You can't just
20	question that is being addressed with the	20	withdraw a question in the middle
21	cohort study so that we can see what the	21	of an answer.
			BY MR. TISI:
22	individual biases are	22	D 1 MIN. 1151.
22	individual biases are Q. Right.	23	Q. Doctor, can you name me one

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	Page 334		Page 336
1		1	idea and I don't know what the
1	where the patients were asked more than	1 2	
2	once about their talc exposure?	l .	relevance is in terms of of me
3	A. I cannot, but I'm not I'm	3	having issues or the
4	trying to say why that's not really a	4	limitations of this particular
5	relevant question.	5	study.
6	Q. Okay. I just want to know	6	BY MR. TISI:
7	if they were asked more than once in any	7	Q. Well well, then let me
8	of these studies.	8	let me
9	A. They weren't asked more than	9	MR. SOILEAU: Let me do this
10	once in the case-control studies either.	10	and fix this, because we may have
11	Q. Well, that was only because	11	gotten off. I don't think
12	they were retrospective, right?	12	MS. SHARKO: I thought only
13	A. Well, there are reasons why	13	one person
14	that asking only once in the cohort study	14	MR. SOILEAU: I'm doing
15	also is not entirely relevant.	15	exhibits. I'm not asking
16	Having to do with at the age	16	questions.
17	that women generally start using talc,	17	MR. TISI: It's an exhibit
18	which is early adulthood, and the fact	18	issue.
19	that it's a habitual use and it's very	19	MS. SHARKO: But I'm happy
20	unlikely that a woman age, say 55, who	20	to have you talk. That's okay.
21	hadn't been using talc would all of the	21	MR. SOILEAU: I'm just going
22	sudden start using talc.	22	to I think we agreed that we
23	Q. Are you do you think that	23	had 18 as the Viagra report, 19 as
24	you're a better qualified epidemiologist	24	Chapter 8 of the Rothman text.
	Page 335		Page 337
1	than Ken Rothman is?	1	And I do not believe in the
2	MR. LOCKE: Objection.	2	record that the "Six Persistent
3	MS. MILLER: Objection.	3	Research Misconceptions" that has
4	What's with these questions?	4	been discussed over the last pages
5	THE WITNESS: I'm not	5	with the witness was actually
6	speaking on I'm not speaking on	6	identified by number.
7	qualifications or not.	7	It has a sticker on it
8	I'm speaking on the fact	8	that's wrong. It should be
9	that there this is probably one	9	Exhibit 20.
10	of the only papers that that	10	MS. MILLER: It says 19. Do
11	takes this stance that the general	11	you want to make it 20?
12	accepted principles of	12	MR. SOILEAU: Yeah, here's a
13	epidemiology are wrong.	13	sticker. You can just stick it
14	BY MR. TISI:	14	over the top of it.
15	Q. Do you know do you know	15	MS. MILLER: I wrote 20
16	that Dr. Rothman was actually unlike	16	right over it.
17	you, Dr. Rothman was actually asked by	17	MR. SOILEAU: Okay. Very
18	the talc industry, including Johnson &	18	good. And I apologize for
19	Johnson, to consult for them on the	19	interrupting.
20	talc-ovarian cancer association, did you	20	(Document marked for
21	know that?	21	identification as Exhibit
22	MR. LOCKE: Objection.	22	Ballman-21.)
23	MS. MILLER: Objection.	23	MR. TISI: I'd like to show
24	THE WITNESS: I I have no	24	you Exhibit Number 24.
47	TILL WITTILDS, I I Have no		you Exhibit Mullioct 24.

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	Page 338		Page 340
1	MS. MILLER: Wait. 21?	1	BY MR. TISI:
2	MR. TISI: 21. I'm sorry.	2	Q. Dr. Ballman
3	21.	3	A. Yes.
4		4	Q. Unlike you, the scientists
5	MS. MILLER: You just	5	at Johnson & Johnson, reached out to
	skipped 21, 22, 23.	6	·
6	MR. TISI: I'm sorry.	7	Dr. Rothman in 2000 to draft a report
7	You're right. BY MR. TISI:	8	related to talc. Do you see that?
8		9	MR. LOCKE: Objection.
9	Q. I'm going to represent to		THE WITNESS: I can you
10	you, Doctor, that Dr. Rothman and his	10	show me where this was
11	colleagues were asked to draft a report	11	commissioned by Johnson & Johnson?
12	for the national toxicology program in	12	BY MR. TISI:
13	2000 related to talc and ovarian cancer.	13	Q. I'm going to ask you to
14	Have you seen this before?	14	I'm going to ask you to assume that,
15	A. Now is this published	15	because that's what the record will show.
16	somewhere?	16	This was a report submitted to the
17	Q. It was for the talc industry	17	National Toxicology Program on the part
18	including Johnson & Johnson. They	18	of J&J?
19	actually contributed to paying for it.	19	MR. LOCKE: Objection.
20	MR. LOCKE: Objection.	20	BY MR. TISI:
21	THE WITNESS: Sort of like	21	Q. So let me let me show
22	an expert report is in litigation?	22	you.
23	BY MR. TISI:	23	A. But where does it say that?
24	Q. Sort of like absolutely	24	Where does it say the National
	Page 339		Page 341
1	absolutely. Sort of like that. Like	1	Toxicology
2	in	2	Q. I'm asking you to assume it.
3	A. Like I've been asked to do?	3	I'm allowed I'm allowed to ask you to
4	Q. Like in real time, when the	4	assume it. And counsel will correct me
5	issues were but the difference is,	5	later if I'm wrong.
6	see, they were asked by scientists at	6	A. Okay.
7	Johnson & Johnson that they contacted	7	Q. The judge will strike me.
8	Dr. Rothman. It's the lawyers who	8	A. Okay.
9	contacted you.	9	Q. Okay?
10	MS. MILLER: Objection. Was	10	MS. MILLER: I don't know if
11	that a question or are you just	11	the judge will actually strike
12	giving speeches now?	12	you.
13	MR. TISI: Well, no, she's	13	BY MR. TISI:
14	giving me a speech.	14	Q. So on Page 3 on Page 3,
15	MS. MILLER: She's she's	15	Dr. Rothman and his two colleagues
16	sitting	16	this wasn't just written by him, right?
17	MS. SHARKO: The witness	17	A. But again, Dr. Rothman, it's
18	you know, it's really rude to call	18	not independent of Dr. Rothman.
19	a woman "she."	19	Q. Okay. That's fine. He
20	MR. TISI: Okay.	20	writes, "Exposure misclassification."
21	MS. SHARKO: Her name is	21	Do you see that section?
22	Dr. Ballman, and I would ask you	22	A. Yes.
,			
23	to treat the witness with respect.	23	Q. Okay. He says this:

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	5 240		244
	Page 342		Page 344
1	studies. It is commonly believed that	1	A in terms of the habits.
2	the validity of case-control studies is	2	I don't know, I haven't
3	worse than cohort studies, but this view	3	looked at this literature. So I'd have
4	is mistaken."	4	to look to see. Do most coffee drinkers
5	Do you see that?	5	start when they're in their early
6	A. Yes, I do.	6	adulthood? Do most versus starting at
7	Q. Okay. And you disagree with	7	age 55. You know, it all depends on the
8	that?	8	specifics of the study.
9	A. Again, it's the same opinion	9	Q. The last two sentences here,
10	by the same individual and and I have	10	state what I think his his rule is.
11	stated that the general principles of	11	"The effect of having a poor measure of
12	epidemiology just does not support that.	12	exposure will be considerable
13	Q. Okay. And the next	13	nondifferential misclassification. A
14	sentence, "The validity of a study design	14	type of error that introduces bias into
15	depends on the specifics of the study	15	study results that tends to drive effect
16	design. The nature of the data and the	16	estimates towards the null condition of
17	nature of the hypothesis that the study	17	no effect.
18	addresses."	18	"In contrast, it may be
19	Do you agree with that?	19	possible to get more detailed information
20	A. So now he's getting into	20	from a study subject in a case-control
21	specifics. And I said I do agree that	21	study which might avoid some of the
22	one case-control study when compared to	22	biases that would result in the cohort
23	one cohort study could be the case that	23	study."
24	the case-control study is done a little	24	Do you see that?
	Page 343		Page 345
1	better than the one cohort study. But	1	MR. LOCKE: Objection to
2	I'm arguing that I'm not arguing. I'm	2	form and to the reference to the
3	sorry.	3	last two sentences.
4	I'm just stating what the	4	MS. MILLER: I'm sorry. I
5	general epidemiology principle is, is	5	can't hear you.
6	that cohort studies, as a whole, have a	6	MR. LOCKE: Objection to
7	higher level of evidence for causality	7	form and the reference to the last
8	than do case-control studies.	8	two sentences.
9	Q. He makes the point, if you	9	BY MR. TISI:
10	go next sentence he gives an example.	10	Q. Read it to yourself. Do you
11	Next sentences says, "Although the	11	agree or disagree with those last two
12	exposure information might be accurate at	12	sentences?
13	the time that it was collected, the	13	A. It's just a very general
14	exposure status of cohort members will	14	statement. I'm not sure what to agree
15	change with time and the initial measure	15	with or not to agree with. Again, I
16	might only be poorly correlated with a	16	think it depends very much on what the
17	more meaningful measure."	17	question that's under consideration or
18	Do you see that?	18	the study under consideration. And I
19	A. And but this has to do in	19	have to point out that says, "Which might
20	particular with coffee drinkers and a	20	thus avoid some of the biases that would
21	one-time dietary assessment. So drinking	21	result in a cohort study."
22	coffee or not is different from whether	22	It doesn't say will. It
23	one uses talcum powder or not	23	doesn't say anything definitive. It says
24		24	
∠ 1	Q. Why?	<u> </u> 44	might.

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	Page 346		Page 348
1	Q. But that's the point,	1	did not show a statistically significant
2	Doctor. And I'm really trying to back up	2	result, whereas in the case-control
3	a little bit.	3	studies, some did, some didn't. And by
4	The point really here is,	4	levels of as I say throughout my
5	what you really have to do is look at the	5	report, as levels of evidence, one needs
6	data and look at the studies, the cohort	6	to go with the cohort studies because
7	and the case-control studies like you	7	they have a higher level of evidence.
8	said in your Viagra report. You look at	8	I'm not comparing one individual cohort
9	them together, and you decide which one	9	study to one individual case-control
10	is better and which one is worse, true?	10	study, where it might be the case that in
11	MS. MILLER: Objection.	11	that particular comparison of two
12	That where did she say that in	12	different studies, maybe case-control was
13	the Viagra report that you should	13	done a little better than cohort.
14	look at them together? Can you	14	Q. So okay. So we'd talked
15	show that us? Because you showed	15	about statistical significance in a short
16	us part of the report. It didn't	16	while.
17	say that. You're misrepresenting	17	So but so what you're
18	her testimony.	18	saying is where there is a if you have
19	MR. TISI: Counsel, please	19	some studies that are cohort studies that
20	stop.	20	are not statistically significant and
21	MS. MILLER: You're	21	some studies that are case-controls that
22	misrepresenting her report. This	22	are statistically significant, the cohort
23	is crazy.	23	studies win?
24	MR. TISI: Stop. It is	24	MS. MILLER: Objection.
	Page 347		Page 349
1	crazy. What is crazy is your	1	THE WITNESS: I am not in
2	speaking/coaching objections.	2	general. I am saying no, I did
3	That's crazy.	3	not say that in general. I said
4	BY MR. TISI:	4	in the data and the analyses I
5	Q. Doctor, in your case in	5	looked at, that was one component
6	your Viagra report you put case-control	6	of the whole totality of the
7	and cohort studies in the same level of	7	analyses.
8	evidence, did you not?	8	BY MR. TISI:
9	A. I do not believe I do.	9	Q. Okay. And statistical
10	Q. Okay.	10	significance was very important to you in
11	A. I was just given one case	11	that way, in other words you kind of
12	where where I no, I do not believe	12	put you saw whether there's a pattern.
13	I do.	13	You put together the statistically
14	Q. Okay. Now, isn't it true	14	significant results, the statistically
15	that you're really, instead of just	15	nonsignificant results, and you felt that
16	blindly saying cohort is better than	16	the statistically nonsignificant results
17	case-control, you have to look at the	17	had the better reliability?
18	studies, how they're designed, what they	18	A. Again, I don't what I did
19	ask, and what the data shows; isn't that	19	was I looked at the totality of the data.
20	true?	20	I saw in the case-control studies, there
21	A. And that's what I did, and I	21	were some statistically significant and
22	applied underlying epidemiological	22	some not statistically significant.
23	principles. And so there were three	23	I did not group those with
24	cohort studies, not just one. All three	24	the cohort studies which also were not

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	Page 350		Page 352
1	statistically significant. So I do not	1	The hospital-based controls, none of them
2	believe that I just sort of put all the	2	were statistically significant. And
3	nonstatistically significant studies	3	those were case-control studies. You
4	together and the statistically	4	know, so you look at the different study
5	significant studies together. I do not	5	designs, and you're getting different
6	believe that's what I did.	6	sort of results, and that's an
7	Q. Do you think statistical	7	inconsistency.
8	significance is the issue that is the	8	Q. Okay. And so they're
9	defines your opinion? In other words	9	inconsistent in that some are
10	in other words, where you feel that there	10	statistically significant and others
11	is inconsistency between the	11	aren't?
12	observational data, because some studies	12	MS. MILLER: Objection.
13	were not statistically significant and	13	THE WITNESS: Again, taken
14	others were.	14	as a whole and I also talk
15	MS. MILLER: Objection.	15	about the fact that if you look at
16	BY MR. TISI:	16	the magnitude of the estimates
17	Q. True?	17	BY MR. TISI:
18	MS. MILLER: Objection.	18	Q. We'll talk about that.
19	THE WITNESS: I don't	19	A that were produced
20	believe that's what I stated. And	20	well, that has to do with consistency
21	I believe I stated all along that	21	too.
22	I did the Bradford Hill analyses.	22	Q. I'm going to talk about I
23	You know, I looked at strength of	23	need to
24	association. I looked at	24	A. Well, no, you asked me if my
	Page 351		Page 353
1	consistency. And I made a note in	1	consistency is just on the basis if
2	terms of consistency that there	2	Q. I didn't.
3	was no consistency on many a	3	A there's statistical
4	lack of consistency on many	4	significance or not.
5	different levels.	5	Q. Doctor, you know, when I
6	BY MR. TISI:	6	ask when I ask a question, it involves
7	Q. Okay. Are you done?	7	different variables, I get accused of
8	MS. MILLER: Are you are	8	asking a compound question. So I'm
9	you still talking?	9	asking you one question at a time.
10	THE WITNESS: So this	10	Is statistical significance,
11	factor so consistency is that,	11	when you looked at these studies overall,
12	you know, it needs to be multiple	12	did you find that the statistically
13	studies across different locations	13	significant results were counter-balanced
14	and populations, and study designs	14	by the statistically insignificant
15	have to show a similar association	15	results?
16	between the exposure and outcome.	16	MS. MILLER: Objection.
17	I would also note within the	17	THE WITNESS: I do not
18	case-control studies	18	I'm sorry.
19	BY MR. TISI:	19	I do not know what you mean
20	Q. Can I can I ask you	20	by counterbalance.
21	A the hospital-based	21	BY MR. TISI:
22	Q a question here? Can I	22	Q. In other words, did they
23	ask you	23	negate them?
24	A. I'm not finished, please.	24	MS. MILLER: Objection.

89 (Pages 350 to 353)

1 THE WITNESS: That's not 2 what I said. 2 shouldn't be done. But 3 BY MR. TISI: 3 correctly and how to be designed.	that they
2 what I said. 2 shouldn't be done. But	· · · · · · · · · · · · · · · · · · ·
	ut to be done
4 Q. Are they inconsistent with 4 correctly, and is to	
5 them? Is it inconsistent that some 5 case meta-analyses	
6 studies are statistically significant and 6 studies, and a separate	
7 others aren't? 7 studies, and not just d	
8 A. Again, consistency requires 8 one meta-analysis tha	
9 that multiple studies across different 9 together.	a comome com
10 locations, populations, and study designs 10 And a lot of t	the
show similar association between the 11 meta-analysis, they do	
12 exposure and the outcome. 12 separately for the case	
13 So I looked at case-control 13 and the cohort studies	
14 studies, which is one design. And within 14 Q. But they do	
15 case-control studies you have 15 combining all the studies.	
16 population-based case-control studies, 16 one of them combine	, ,
r r	R: Objection.
	ESS: Yes. And I
19 a design. 19 have I do know	
20 You also have cohort 20 citations in here	
,	
24 that, you do not come up with the same 24 consistency or no	ot, but you you
Page 355	Page 357
1 association. 1 just have one res	
2 Q. Isn't that why you do a 2 can't see where the	he results
3 meta-analysis? 3 differ.	
4 A. No. 4 BY MR. TISI:	
5 Q. Okay. Well 5 Q. Now, in crit	
6 A. Meta-analysis let me 6 MS. MILLER	R: Is this a good
7 answer finish that. 7 time for a break?	
8 Meta-analyses are not meant 8 MR. TISI: N	lo. Unless you
9 that if results differ from each other 9 need it. Do you	need it?
10 you throw them all together to get a 10 MS. MILLER	R: Do you need it?
	ESS: I need it.
12 results are different from each other, 12 MS. MILLER	R: It's not about
13 you shouldn't do a meta-analyses. That's 13 me. It's about he	er.
	Absolutely. If
15 Q. So you think 15 she needs it, she	can always ask
16 A and that's going to lead 16 for it.	•
	ESS: Yeah, I'm
18 Q. So you think nobody 18 sorry. I was tryir	
19 MS. MILLER: Are you done? 19 Thank you.	
· · · · · · · · · · · · · · · · · · ·	R: Yeah, she's
21 BY MR. TISI: 21 very polite. She's	
22 Q. So you think that there 22 ask.	
	GRAPHER: Stand by,
24 think those shouldn't have been done? 24 please. The time	

90 (Pages 354 to 357)

	Page 358		Page 360
1	Off the record.	1	A. It's why I disagree with the
2	(Short break.)	2	methodology.
3	THE VIDEOGRAPHER: Okay. We	3	Q. Okay. And for the record,
4	are back on the record. The time	4	the cohort studies are what? Gertig,
5	is 2:34 p.m.	5	Gates, Houghton and Gonzales?
6	BY MR. TISI:	6	A. Yeah, it depends on how you
7	Q. In your report Doctor,	7	count cohort studies. But those are
8	we're talking about the talc studies	8	publications on the cohort studies.
9	now you have some criticisms of the	9	Q. And so it's not that the
10	plaintiffs' experts in how they addressed	10	plaintiffs' experts don't consider the
11	the biases in the cohort studies and you	11	cohort studies, they just think that on
12	· · · · · · · · · · · · · · · · · · ·	12	
13	give your opinions about them, and it's	13	balance they're not as reliable as
	pretty clear in your report. You know		MR. TISI: What are you
14 15	that section, correct? MS. MILLER: Is that a	14	shaking your head for?
		15 16	MS. MILLER: Because
16	question?		you're okay, I'll wait. I'll
17	MR. TISI: Yes.	17	object at the end. I didn't mean
18	THE WITNESS: Can you point	18	to be shaking my head.
19	me to the section, please?	19	MR. TISI: You've been doing
20	BY MR. TISI:	20	it the whole time.
21	Q. Sure. I'm happy to do that.	21	MS. MILLER: There's a video
22	On Page 28. Do you see you're addressing	22	that will
23	the issues that the plaintiffs' experts	23	MR. TISI: It will.
24	raise about the cohort studies and you	24	BY MR. TISI:
	Page 359		Page 361
1	address them and your opinions about them	1	Q. So the question is not
2	are pretty clear.	2	your contention is not that the
3	A. So you're talking about the	3	plaintiffs' experts don't address the
4	paragraph that says, "The final argument	4	cohort studies. You just disagree about
5	made by plaintiffs' experts"?	5	the interpretation that they give to the
6	Q. Yeah. Actually and it	6	cohort studies; is that fair?
7	starts you talk about all of the	7	MS. MILLER: Objection.
8	you address all of the issues that I	8	Objection.
9	mean, this is not a trick question.	9	THE WITNESS: My concern is
10	A. Yeah.	10	the methodology used by the
11	Q. You are addressing all of	11	plaintiffs in doing their their
12	the issues that the plaintiffs' experts	12	whole analyses of the data in
13	raise about the cohort studies here, and	13	total.
14	you don't think that they're valid, and	14	BY MR. TISI:
15	you give the reasons for that, correct?	15	Q. And what methodology do you
16	MS. MILLER: Objection.	16	think that they used wrong with respect
17	Objection.	17	to the cohort studies?
18	THE WITNESS: So yeah, you	18	A. I well, again, I think
19	know, as it says here, I I say	19	that they in terms of the methodology,
20	plaintiffs cite certain things,	20	I was talking about methodology, sort of
21	and I point out why I disagree	21	in general. I don't think that they're
22	with their methodology.	22	applying the Bradford Hill criteria in a
			11 / 0
23	BY MR. TISI:	23	methodologically correct manner.

91 (Pages 358 to 361)

	Page 362		Page 364
1	studies, I point out, you know, what they	1	plaintiffs' experts, there's several of
2	say as to why, you know, they say that,	2	them. There's misclassification bias
3	well, the cohort studies, you know,	3	that they identified. You know what that
4	really have no play in terms of	4	is, right?
5	determining consistency.	5	A. Can you point in particular
6	Q. Is that what you think they	6	where they identified a mis
7	say?	7	Q. Well, I'm asking you. You
8	A. I'm paraphrasing. I do	8	identified it in your report. You said
9	not I do not see I don't know	9	that one of the issues that were raised
10	offhand, and I'll have to read through	10	was that they did not the issue that
11	carefully. But it's I seem to remember	11	Dr. Rothman raised
12	that none of the plaintiffs' experts said	12	MS. MILLER: Do you want to
13	that that they gave cohort studies	13	tell us what page you are reading?
14	more weight than they did the	14	MR. TISI: Page 28.
15	case-control studies.	15	MS. MILLER: That would help
16	Q. And you think that they	16	a lot.
17	should have said cohort studies should be	17	MR. TISI: I'm on Page 28.
18		18	
19	given more weight than case-control studies?	19	I told you before. THE WITNESS: Yeah, yeah,
20	A. I'm	20	but I don't know from there where
21		21	
	MS. MILLER: Objection.	22	you're reading.
22	THE WITNESS: I'm saying		BY MR. TISI:
23	MS. MILLER: Please give me	23	Q. Okay. Let me ask you this.
24	time to object. I know everybody	24	Did they identify misclassification bias?
	Page 363		Page 365
1	is tired this afternoon.	1	A. I don't know. I mean, can
2	BY MR. TISI:	2	you
3	Q. I mean, I'm reading what	3	Q. I'm asking you. You're the
4	you. You said, "I don't know offhand but	4	expert. I'm just a lawyer. Did they
5	I'll have to read through carefully. But	5	identify misclassification bias?
6	it seemed I seem to remember that none	6	A. I'll have to go through all
7	of plaintiffs' experts said that they	7	the expert reports and see which ones.
8	gave cohort studies more weight than they	8	Q. I'm asking, in your
9	did case-control studies."	9	report in your report, do you identify
10	And you think that's a	10	that she would that the witness's
11	methodologic flaw?	11	plaintiff were concerned about
12	A. I I in the end I may	12	misclassification bias?
13	be misremembering exactly what they said.	13	A. I'll have to go through my
14	But I do believe some of them said I	14	report.
15	weighted the case-control studies more	15	MR. LOCKE: Objection to
16	because here are flaws in the cohort	16	form. Maybe it's just the
17	studies and that sort of makes them	17	pronouns. But are you talking
18	invalid.	18	about a specific witness?
19	And due to the generally	19	MR. TISI: No. She's
20	accepted principle in epidemiology that	20	lumping them altogether.
21	cohort studies have higher evidence than	21	MS. MILLER: Where is she
	-	22	lumping them altogether?
22	do case-control studies, I don't think		rumping mem anogenier:
22	do case-control studies, I don't think that's correct.	23	BY MR. TISI:

92 (Pages 362 to 365)

	Page 366		Page 368
1	says the final argument made by	1	THE WITNESS: That's more of
2	plaintiffs' experts.	2	a feasibility question and a
3	A. Yes. And I cite two of	3	resource question. I don't see
4	them, so what is 15 and 73?	4	how that creates any biases or
5	So one is, as I we've	5	confounding or issues like that.
6	been talking about, is that the level of	6	BY MR. TISI:
7	evidence in cohort studies is weaker than	7	Q. One of the things that you
8	that in case-control studies.	8	raised is that Narod had mentioned that
9	And number 15 and 73 are	9	there should be 200,000 patients. Do you
10	so that would be McTiernan and Moorman.	10	remember that?
11	Q. Okay. So now let me ask you	11	A. Yes, I do. We can look at
12	this. Do the witnesses do as a whole,	12	it here.
13	do the plaintiffs' experts, one, or all	13	Q. Let me ask you. Did you
14	of them, talk about the issue of	14	ever did you did you do any power
15	misclassification bias?	15	calculation to determine how big a cohort
16	MS. MILLER: Objection.	16	study would have to be in order to
17	THE WITNESS: I can't	17	identify a risk of ovarian cancer?
18	remember off the top of my head.	18	MR. LOCKE: Objection.
19	BY MR. TISI:	19	BY MR. TISI:
20	Q. But you know what	20	Q. If you disagree if you
21	misclassification bias is, right?	21	disagree with Dr. Narod?
22	A. Yes, I do.	22	MS. MILLER: Objection.
23	Q. What is it?	23	Is the question the first
24	A. It's when you put a case	24	one or is the second question?
	Page 367		Page 369
1	into the control group or you put a	1	Is, "Do you disagree with
2	control into the case group.	2	Dr. Narod a question?" Or is it
3	Q. Okay. And that is a	3	editorial content? What is that?
4	recognized bias and that's what	4	Objection.
5	Dr. Rothman was talking about is a	5	MR. TISI: Thank you.
6	recognized bias within within cohort	6	That's that's all you have to
7	studies, correct?	7	say.
8	A. It doesn't have to be just	8	MS. MILLER: Well, I need to
9	cohort studies you can have	9	know.
10	misclassification biases in case-control	10	MR. TISI: You don't.
11	studies.	11	MS. MILLER: The witness
12	Q. Okay. But that is a	12	needs to know.
13	recognized concern about cohort studies,	13	MR. TISI: She's doing just
14	right?	14	fine.
15	A. It's something one needs to	15	MS. MILLER: Do you know
16	be aware of when they are looking at	16	what the question is?
17	cohort studies. It doesn't mean that	17	THE WITNESS: I'm not sure.
18	every cohort study has misclassification	18	BY MR. TISI:
19	bias.	19	Q. Doctor
20	Q. Isn't it also another	20	A. But I heard that I
21	concern that the studies that cohort	21	Q. Because you were queued by
22	studies are difficult to design if	22	your lawyer, let me ask you this
23	they're studying a rare disease?	23	MS. MILLER: It doesn't take
24	MS. MILLER: Objection.	24	a queue to know.
	TAID. TAILLEIN. OUTCHUIL.	ı ∠ ±	a queue to know.

93 (Pages 366 to 369)

	Page 370		Page 372
1	BY MR. TISI:	1	A. I'm saying on the basis of
2	Q. You recall you recall	2	what we have here, I mean, if you read
3	MR. TISI: Counsel, please.	3	that whole thing, it says, "Across the
4	BY MR. TISI:	4	three prospective studies there's 1,400
5	Q. You recall that you that	5	women with ovarian cancer, over 200,000
6	Dr. Narod said that you would have to	6	without." So if you take those numbers,
7	have 200,000 patients in a cohort study	7	the power to detect a hazard ratio of 1.2
8	in order to detect detect ovarian	8	or larger is over 90 percent with a
9	cancer, do you remember that?	9	two-sided level of significance of .05.
10	A. We can go to the Narod	10	Q. Do you know whether or not
11	study. I just want to make sure exactly	11	other people outside of litigation have
12	what he said, but	12	actually looked at the concerns about the
13	MS. MILLER: Is there a	13	cohort studies that the plaintiffs'
14	specific part of her report that	14	experts have identified?
15	you're referring to?	15	A. I'm not sure what the
16	MR. TISI: I'll find it for	16	question is.
17	you. Honestly, she remembers it,	17	Q. Well, I'll read it again.
18	so you don't have to keep doing	18	A. I mean, is there a
19	that.	19	publication that looked at the cohort
20	BY MR. TISI:	20	Q. Do you know whether or not
21	Q. Do you see in the middle of	21	people people, scientists outside of
22	Page 26 where it says, on your report,	22	litigation, have looked at the issues
23	"Across two different prospective	23	related to the talc cohort studies and
24	studies, there were approximately 1,400	24	agreed with the plaintiffs?
	Page 371		Page 373
1		1	
1	women diagnosed with ovarian cancer and	1	MS. MILLER: Objection.
2	more than 200,000 women who were not	2	THE WITNESS: I'm I mean,
3	diagnosed with ovarian cancer."	3	the meta-analyses obviously looked
4	Do you see that?	4	at the cohort studies, and I do
5	A. Yes. I see that.	5	not remember
6	Q. Okay. So now my question	6	BY MR. TISI:
7	is, did you do any power calculations to	7	Q. Did you read the Taher?
8	determine how big the cohort studies	8	A. The unpublished study that
9	would have to be to detect ovarian	9	hasn't been through peer review yet?
10	cancer, or are you relying on Narod?	10	Q. Actually it's actually
11	A. I think if you go down. It	11	been through peer review. But it's not
12	says the power to detect a hazard ratio	12	been published yet. You're correct.
13	of 1.2 or larger is over 90 percent with	13	But let me ask you
14	a two-sided level of confidence of 0.05.	14	A. So there's a notification of
15	Clearly this is sufficient power for an	15	publication?
16	association of 1.26 that is observed in	16	Q. Doctor, just I'm not
17	the case-control studies to be found	17	under I'm not under oath here.
18	statistically significant.	18	A. Sorry.
19	So that so that is a	19	Q. I'm asking you I'm asking
20	power statement.	20	you this question?
21	Q. Okay. I'm asking you how	21	A. Yeah.
22	many patients would have to be enrolled	22	MR. TISI: Are we laughing?
123	in a study. So what would that turn out	23	Is that part of part of
23 24	to be?	24	deposition protocol?

94 (Pages 370 to 373)

	Page 374		Page 376
1	MS. SHARKO: Well, you	1	was no question pending, Counsel.
2	represented that it was	2	BY MR. TISI:
3	peer-reviewed.	3	Q. Okay. If you go to Page 43.
4	MR. TISI: I'm	4	It says at the top, Although the reasons
5	representing	5	are unclear, the difference potentially
6	MS. SHARKO: And then you say	6	due to issues related to latency, study
7	you're not under oath. Can we see	7	power or exposure misclassification.
8	the peer review? Are you guys	8	And they're talking about
9	part of that?	9	the difference between cohort and case
10	BY MR. TISI:	10	controls.
11	Q. Doctor Doctor	11	Do you see that?
12	MR. TISI: I'm not part of	12	A. I'm sorry, where were you
13	it, Counsel. You know I'm not	13	reading again? Was it starting
14	part of it.	14	"although"?
15	MS. SHARKO: No, I don't.	15	Q. And the very top, "The
16	BY MR. TISI:	16	effect estimates of the meta-analysis
17	Q. Do you know whether or not	17	reported on 24-case-control studies"
18	the Taher authors have identified the	18	A. Yes.
19	same weaknesses with the cohort study as	19	Q "and three cohort studies
20	the plaintiffs' experts did?	20	and refer to ever versus never use of
21	A. I don't remember off the top	21	perineal talc. And it talks about the
22	of my head	22	fact that there's a difference between
23	Q. Let's look at it.	23	the case-control and the cohort studies.
24	A but I would have sort of	24	Do you see that?
	Page 375		Page 377
1	the same	1	A. Yes, I do.
2	MR. TISI: Yes, hers has the	2	Q. Okay. And "Although the
3	tab.	3	reasons for this are unclear, the
4	MS. MILLER: Do you want	4	difference could potentially be due to
5	this tab?	5	issues related to latency, study power or
6	BY MR. TISI:	6	exposure misclassification," correct?
7	Q. You read the you read	7	A. You know, that's what he
8	the	8	says there. And I think it's really
9	MR. TISI: Yes, I did that	9	striking that he doesn't talk about what
10	to make her life easy.	10	most people talk about in terms of the
11	(Document marked for	11	limitations of the case-control studies.
12	identification as Exhibit	12	So most people would say well, the reason
13	Ballman-22.)	13	is, is because there's recall bias. And
14	THE WITNESS: So this looks	14	we do have evidence of how recall bias
15	like a draft.	15	can affect these results from
16	BY MR. TISI:	16	Schildkraut. And so and so there it
17	Q. Yes, correct.	17	can be kicked around
18	A. So whether it's been	18	Q. There's no question
19	peer-reviewed.	19	there's no question pending.
20	Q. I'm asking you I'm asking	20	A. Well, you asked me
21	you whether they identified	21 22	Q. I didn't ask you. I asked
1 7 7	IVIN IVIII I HR' VOII 1110f		you whether I read that right.
22	MS. MILLER: You just		
22 23 24	interrupted her. MR. TISI: Okay. I there	23	MS. MILLER: Please stop interrupting her.

95 (Pages 374 to 377)

	Page 378		Page 380
1	MR. TISI: I asked you	1	addressed in this paper?
2	MS. MILLER: She wants to	2	A. I don't know.
3	give full, accurate answers.	3	Q. Okay.
4	MR. TISI: But there was no	4	A. And let me just point
5	question pending.	5	Q. So now, let's talk about the
6	MS. MILLER: And you're	6	cohort studies, which is what we were
7		7	
8	trying to stonewall her. MR. TISI: No, she's trying	8	talking about. MS. MILLER: She was in the
9	to stonewall me.	9	middle of a sentence.
10	BY MR. TISI:	10	BY MR. TISI:
		11	
11	Q. I'm asking you this. I said		Q. The next paragraph talks
12	their reason they identify three reasons	12	about latency. It says, "Although cohort
13	why there could be a difference between	13	designs are efficient in examining
14	the case-control and the cohort studies,	14	diseases with long latency periods, it is
15	did they not? And the answer is either a	15	essential that the period between talc
16	yes or no.	16	exposures and cancer's diagnosis be
17	MS. MILLER: Sometimes in	17	specific" "sufficiently long.
18	life an answer isn't yes or no.	18	Gonzales suggested that the latency
19	And if the witness feels like she	19	period for ovarian cancer is between 15
20	needs to give a complete answer,	20	and 20 years.
21	please allow her to give a	21	"In the cohort studies
22	complete answer.	22	included in this review, Houghton
23	BY MR. TISI:	23	reported a mean follow-up of 12.4 years
24	Q. Doctor, did I read the	24	while Gates followed a cohort of women
	Page 379		Page 381
1	following statement correct:	1	for 24 years. Gertig and Gonzales
2	"Although the reasons for	2	noticed that" "noted that one of their
3	this are unclear, the difference could	3	studies' main limitations one was the
4	potentially be due to issues related to	4	relatively short follow-up period that
5	latency, study power, or study	5	may not accurately detect a potential
6	misclassification."	6	association between talc exposure and
7	A. You read that sentence	7	ovarian cancer."
8	correct. But you were saying that	8	Do you see that?
9	that there are experts outside of	9	MR. LOCKE: Objection.
10	litigation that have the same objections	10	THE WITNESS: I do see that.
11	as do the plaintiffs' experts. And so I	11	BY MR. TISI:
12	was and you're citing this.	12	Q. Okay. And that is the very
13	Q. Okay.	13	same thing that the plaintiffs' experts
14	A. And I'm trying to be	14	identify, correct?
15	completely, you know, truthful. And I'm	15	MS. MILLER: Objection.
16	saying this is surprising to me, because	16	BY MR. TISI:
17	first of all, it hasn't been put through	17	Q. You disagree with it, but
18	peer review. So I don't know if this	18	they identified it?
19	will stand. The reviewers may say	19	MS. MILLER: Objection.
20	well, you can say this the other way,	20	THE WITNESS: And I'm saying
21	which most people would, is the issue is,	21	that the methodology and and
22	is that the case-control studies have	22	sort of what's being stated here
23	recall bias and selection bias.	23	is is not a true representation
24	Q. Have those not been	24	of what's going on.
4 1	Q. Have those not been	4	or what's going oil.

96 (Pages 378 to 381)

	Page 382		Page 384
1	BY MR. TISI:	1	something outside of litigation that
2	Q. Okay. So they're wrong?	2	hasn't been published to say, look, this
3	MS. MILLER: Objection.	3	is in support of our experts' opinion.
4	THE WITNESS: I'm saying	4	So I don't know how that has much weight.
5	that I I think that the	5	Q. The next statement is
6	methodology applied has not has	6	deals with the power issue. In addition
7	some flaws in it.	7	cohort studies included may have
8	BY MR. TISI:	8	underpowered may have been
9	Q. Okay. So the methodology of	9	underpowered to detect an odds ratio of
10	these folks outside of litigation are	10	1.3 from the case-control studies. This
11	wrong	11	was noted by Narod who suggested a cohort
12	A. But these	12	of at least 200,000 women would be needed
13	Q but yours is right?	13	to reach statistical significance if the
14	A. Sorry.	14	true odds ratio is 1.3. The cohort
15	Q. Correct?	15	studies included in this review included
16	MS. MILLER: Objection.	16	much smaller cohort studies, ranging
17	THE WITNESS: I'm saying	17	between 41,000 and 78,000 women.
18	that I followed the general	18	Do you see that?
19	principles of evaluating causation	19	A. I see where it's stated
20	on the basis of epidemiology good	20	there.
21	practice.	21	MS. MILLER: You didn't read
22	And this has not even been	22	that exactly.
23	peer-reviewed yet, so	23	MR. TISI: I didn't read it
24	BY MR. TISI:	24	exactly. You're right.
	Page 383		Page 385
1	Q. So the next nor has your	1	MS. MILLER: No, you didn't.
2	report, right?	2	BY MR. TISI:
3	MS. MILLER: Objection.	3	Q. My question is
4	BY MR. TISI:	4	MS. MILLER: So
5	Q. Your report hasn't been	5	BY MR. TISI:
6	peer-reviewed, right?	6	Q were any were any of
7	MS. MILLER: Objection.	7	the cohort studies above 80,000 women?
8	THE WITNESS: So I'm not	8	A. I'm saying that if you look
9	using anything outside of	9	at the meta-analyses of the cohort
10	litigation that hasn't been	10	studies, there it meets, as I said in
11	peer-reviewed to say, look, you	11	my report, meets the 200,000, and there
12	know, this	12	is sufficient power there. And The
13	BY MR. TISI:	13	meta-analyses of the cohort studies did
14	Q. But your	14	not find a statistically significant
15	A is in support of that.	15	result.
16	And so that's	16	Q. Where was the meta-analysis
17	Q. But your report	17	for the cohort studies? Where was that?
18	A what I'm saying.	18	A. Oh, let's look at I think
19	Q has not been	19	Berge has meta-analysis of the cohort.
20	peer-reviewed, correct?	20	Penninkilampi also has a meta-analysis.
21	A. But that wasn't the relevant	21	Those are the two most recent ones. And
22	thing.	22	those are published.
23	Q. Okay.	23	Q. The next the next thing
24	A. You were pointing to	24	deals with the misclassification bias.

97 (Pages 382 to 385)

	Page 386		Page 388
1	MR. TISI: God bless you.	1	sort of take a deeper dive and see if
2	BY MR. TISI:	2	there's any evidence for or against that.
3	Q. On the next page, it says,	3	Q. Let's talk about strength of
4	Finally, in cohort studies talc exposure	4	association.
5	was assessed at cohort entry and was used	5	You I'm going to do this
6	to measure as a measure of chronic	6	pretty quickly I think. On Page 22 of
7	talc use during follow-up.	7	your report you talk about that, correct?
8	It is possible women who	8	A. I have a section that says
9	were not exposed to perineal talc at the	9	strength of association.
10	time of cohort entry began using talc	10	Q. And the first two sentences,
11	later time and vice versa, possibly	11	you say, "The criterion does not have a
12	introducing nondifferential	12	hard threshold. There is no cut-off
13	misclassification of exposure, which	13	value for the magnitude of an association
14	could have biased the risk estimate	14	between an exposure required for a
15	towards the null value of unity.	15	relationship to be causal."
16	MS. MILLER: I just want to	16	And you agree with that,
17	say object. That was paraphrased.	17	correct?
18	It wasn't read exactly.	18	A. There's no hard threshold.
19	BY MR. TISI:	19	I mean, there is no hard number that, you
20	Q. Do you read that?	20	know, people would say, oh, it's 1.31.
21	A. I see where you're reading	21	No, it's 1.32.
22	from.	22	Q. Okay. On Page 22, again,
23	Q. And that's the same	23	you say, "Most epidemiologists regard the
24	misclassification bias that Dr. Rothman	24	relative risk odds ratio or risk ratios
	Page 387		Page 389
1	mentioned and plaintiffs' experts also	1	are less than 1.5 to be weak
2	experts also mentioned as well.	2	relationships."
3	A. Yeah. And that's just a	3	Do you see that?
4	statement there, but it doesn't go into	4	A. Yes. And I have citations
5	sort of how this applies to talc in	5	there.
6	general. It's just a general statement.	6	Q. Okay. And then you go on to
7	So for instance, it doesn't	7	say, "Although there are instances where
8	acknowledge that most women begin talc	8	ratios under 1.5 are established to be
9	use in their early adulthood. It doesn't	9	causal based upon observational data,
10	acknowledge that so that means that	10	there are more instances where they are
11	most women by the time they're 55,	11	spurious due to confounding or bias."
12	probably wouldn't start using tale at	12	Do you see that?
13	that point.	13	A. Yep. With the citation.
14	And even if they did, there	14	Q. Okay. That citation is to
15	probably wouldn't be sufficient follow-up	15	an article by Taubes?
16	time at that point for ovarian cancer to	16	A. Mm-hmm.
17	develop.	17	Q. Okay. Who is Gary Taubes?
18	So these are much more	18	A. I don't know offhand who he
19	subtle than just sort of stating a	19	is.
20	platitude that, oh, yeah, this is a thing	20	Q. Gary Taubes, is he a doctor?
21	you have to look out for in cohort	21	A. I I don't know offhand.
22	studies and, therefore, it's true.	22	If I could see the article. I could see
23	It is something that you	23	if he has a Ph.D. or M.D. behind his
24	have to look out for. But you have to	24	name.

98 (Pages 386 to 389)

	Page 390		Page 392
1	MR. TISI: Exhibit 30,	1	really well respected journal.
2	please.	2	Q. Do you know, Doctor, that
3	MS. MILLER: So that would	3	Taubes is a journalist and not a doctor?
4	be 23.	4	A. Oh, I did not realize that.
5	MR. SOILEAU: Yes, that	5	But he's quoting many individuals in here
6	would be 23.	6	who are famous epidemiologists, Norman
7	MS. MILLER: I can't figure	7	Breslow.
8	out your code. But you're always	8	Q. Doctor, do you see a nice,
9	off by a always a different	9	big picture of
10	number.	10	A. I see Ken Rothman in there.
11	MR. TISI: Yes, it is,	11	Q. Yeah.
12	because I'm off my	12	A. Who you say is so he
13	MS. MILLER: It's not like I	13	he may be reporting. But it's Sander
14	can even add or subtract.	14	Greenland.
15	(Document marked for	15	Q. That's the other guy who, if
16	identification as Exhibit	16	you look at the book there, they both
17	Ballman-23.)	17	co-authored the book on epidemiology?
18	BY MR. TISI:	18	A. Right.
19	Q. I don't have the whole	19	Q. All right. And first of
20	thing. But I'm going to give you mine.	20	all, is this a peer-reviewed article?
21	This is an article by Dr. Taubes. And it	21	A. Since it says "Special news
22	has my highlighting on it, which of	22	report," I don't know if it was
23	course I will be glad to substitute one.	23	peer-reviewed or not.
24	MS. SHARKO: We don't mind	24	Q. Did you look and see whether
2 1	Page 391	21	Page 393
1	your highlighting.	1	or not the people who were quoted in this
2	MR. TISI: That's okay. I'm	2	news article, first of all, do you
3	happy to have you show it to the	3	typically cite news articles in your
4	jury.	4	published published papers?
5	MS. MILLER: There's no jury	5	MS. MILLER: Objection.
6	here. This is a Daubert	6	THE WITNESS: Well, if they
7	proceeding. We've established	7	interview epidemiologists so
8	that like 16 times. So I don't	8	the epidemiologist interviewed by
9	know which jury you're talking	9	Science, so I believe that
10	about.	10	journalist would sort of report
11	MS. SHARKO: There's never	11	correctly what the epidemiologist
12	going to be a jury. We're going	12	said that they interviewed.
13	to be done after Daubert.	13	BY MR. TISI:
14	MR. TISI: There have been	14	Q. So you don't you don't
15	plenty of juries. They've all	15	buy fake news, huh?
16	said the same thing.	16	MS. MILLER: Objection.
17	BY MR. TISI:	17	BY MR. TISI:
18	Q. Is that the article that	18	Q. Let me ask you this, Doctor.
		19	MS. MILLER: Was that a
19	you've referred to?		
20	A. Yes, it is.	20	question that you actually want
20 21	A. Yes, it is.Q. Okay. Can you tell me	20 21	question that you actually want her
20 21 22	A. Yes, it is. Q. Okay. Can you tell me whether Dr. Taubes first of all, it's	20 21 22	question that you actually want her MR. TISI: Yeah. I withdraw
20 21	A. Yes, it is.Q. Okay. Can you tell me	20 21	question that you actually want her

99 (Pages 390 to 393)

	Page 394		Page 396
1	tell.	1	support your your statement, yes.
2	BY MR. TISI:	2	MS. MILLER: Objection.
3	Q. Did you see did you see	3	That's
4	whether or not the people who were quoted	4	BY MR. TISI:
5	wrote a rebuttal to this report?	5	Q. The next sentence, he says,
6	A. No, I did not look.	6	A problem does A problem does not
7	(Document marked for	7	exist with general medical reports about
8	identification as Exhibit	8	single scientific studies.
9	Ballman-24.)	9	Correct?
10	BY MR. TISI:	10	MS. MILLER: Objection.
11	Q. In the same article, and you	11	MR. LOCKE: Objection. You
12	use the same rigor in doing in	12	added a "not".
13	drafting your report that you would do in	13	BY MR. TISI:
14	any publication, right?	14	Q. "A problem does exist with
15	MS. MILLER: Objection.	15	general media reports about single
16	BY MR. TISI:	16	scientific studies."
17	Q. In drafting your expert	17	Correct?
18	report, you use the same scientific rigor	18	A. Yes, that's what it says
19	that would you use in every publication	19	there.
20	that you that you'd use?	20	Q. And most of the examples
21	MS. MILLER: Objection.	21	that are cited in the Taubes articles had
22	THE WITNESS: I applied	22	one observational study, correct?
23	scientific rigor in doing my	23	A. Yeah. That might be the
24	analyses and writing my report.	24	case.
	Page 395		Page 397
1	BY MR. TISI:	1	Q. Okay. Now, talc has, we
2	Q. So in the same journal of	2	established earlier, over 30, correct?
3	Science, Drs if you look at the next	3	A. Well, again, it depends upon
4	page, Drs. Willett, Greenland, MacMahon	4	how you measure studies. I don't know if
5	Rothman, Thomas, Thun and Weiss wrote a	5	
6			they are 30 independent with different
l _	letter.	6	they are 30 independent with different datasets.
7			datasets.
7 8	Do you see that?	6	
	Do you see that?	6 7	datasets. Q. Certainly over one?
8	Do you see that? A. Yes, I see that.	6 7 8	datasets. Q. Certainly over one? A. That's correct.
8 9	Do you see that? A. Yes, I see that. Q. Okay. And the first	6 7 8 9	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by
8 9 10	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits,"	6 7 8 9	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes
8 9 10 11	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news	6 7 8 9 10 11	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of
8 9 10 11 12	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of	6 7 8 9 10 11	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the
8 9 10 11 12 13	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in	6 7 8 9 10 11 12	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge."
8 9 10 11 12 13 14	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others	6 7 8 9 10 11 12 13	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that?
8 9 10 11 12 13 14 15	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave	6 7 8 9 10 11 12 13 14	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say,
8 9 10 11 12 13 14 15	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that	6 7 8 9 10 11 12 13 14 15	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from.
8 9 10 11 12 13 14 15 16 17	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that evidence-based epidemiologic findings are	6 7 8 9 10 11 12 13 14 15 16 17	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say,
8 9 10 11 12 13 14 15 16 17 18	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that evidence-based epidemiologic findings are not usually credible." Did I read that right? A. Yeah, you read that right.	6 7 8 9 10 11 12 13 14 15 16 17	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say, "In any scientific field, findings of
8 9 10 11 12 13 14 15 16 17 18 19	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that evidence-based epidemiologic findings are not usually credible." Did I read that right?	6 7 8 9 10 11 12 13 14 15 16 17 18	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say, "In any scientific field, findings of individual studies are not usually
8 9 10 11 12 13 14 15 16 17 18 19 20	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that evidence-based epidemiologic findings are not usually credible." Did I read that right? A. Yeah, you read that right.	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say, "In any scientific field, findings of individual studies are not usually considered seriously until confirmed by others. Also, in epidemiology, as in another scientific fields, more powerful
8 9 10 11 12 13 14 15 16 17 18 19 20 21	Do you see that? A. Yes, I see that. Q. Okay. And the first sentence says, "In the special news report, "Epidemiology Faces Its Limits," Gary Taubes assembles a series of quotations from ourselves and others about potential methodologic pitfalls in epidemiologic studies that might leave readers with the misimpression that evidence-based epidemiologic findings are not usually credible." Did I read that right? A. Yeah, you read that right. Does are we talking about is this	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	datasets. Q. Certainly over one? A. That's correct. Q. Okay. It says, "Taubes seems to perpetuate this confusion by listing several media reports of published findings and telling the reader, 'You should be the judge." Do you see that? A. I see where you're reading from. Q. Okay. It goes on to say, "In any scientific field, findings of individual studies are not usually considered seriously until confirmed by others. Also, in epidemiology, as in

100 (Pages 394 to 397)

	Page 398		Page 400
1	Do you see that?	1	Cancer Institute is?
2	MR. LOCKE: Objection.	2	A. You mean what is it?
3	THE WITNESS: Yep.	3	Q. Yes.
4	BY MR. TISI:	4	A. I thought you said who. Is
5	Q. Okay. So you cited the	5	it who or what?
6	Taubes article but you didn't really	6	Q. What is the National Cancer
7	consider the quotations, the	7	Institute?
8	epidemiologist who thought differently,	8	A. So it's it's a government
9	correct?	9	agency that funds cancer research.
10	MS. MILLER: Objection.	10	Q. Okay. Would it surprise you
11	THE WITNESS: But I think	11	that the National Cancer Institute
12	there are other quotations, such	12	characterized risks as low as 1.2 as a
13	as, "Often doing so will require	13	moderate risk and not a weak risk?
14	large and long-term prospective	14	MR. LOCKE: Objection.
15	studies."	15	THE WITNESS: Can I see what
16	And it also states that,	16	you're citing that from, please?
17	"Taubes writes that, I have	17	MR. TISI: Sure.
18	expressed the view that a fourfold	18	BY MR. TISI:
19	risk should be taken seriously.	19	Q. National Cancer Institute,
20	This is correct, but only when the	20	PDQ on the NI from "Ovarian Fallopian
21	finding stands in the biological	21	Tube and Primary Peritoneal Cancer:
22	vacuum"	22	Peritoneal Cancer Prevention."
23	BY MR. TISI:	23	(Document marked for
24	Q. Right.	24	identification as Exhibit
	Page 399		Page 401
1	A "and has no" "or no	1	Ballman-25.)
2	biomedical credibility."	2	BY MR. TISI:
3	Q. Okay.	3	Q. Do you see that?
4	A. "We all take seriously small	4	A. Yes, I see that. That's the
5	relative risk when there are credible	5	title of the article. Yes.
6	hypothesis in the background."	6	Q. And if you go to Page 3. It
7	Q. And you don't think the	7	identifies factors with adequate evidence
8	hypothesis that talc could cause ovarian	8	of increased risk of ovarian, fallopian
9	cancer is credible?	9	tube and primary peritoneal cancer.
10	A. After doing my complete	10	Do you see that?
11	scientific review, I I again come to	11	A. Yes, I do.
12	the conclusion that there's no evidence	12	Q. Okay. And it talks about
13	of a causal relationship between	13	for each one of them, the magnitude of
14	peritoneal talcum powder exposure and	14	the effect?
15	ovarian cancer.	15	A. Yes, I see that.
16	Q. Okay. You mentioned that	16	Q. Okay. The magnitude of
17	you think that the most	17	effect for endometriosis is modest with
18	epidemiologists would categorize the	18	an observed relative risk rate of 1.8 to
19	risks seen in these studies as weak?	19	2.4?
20	A. I yes.	20	A. Yes.
21	Q. Okay. Who is the National	21	Q. Magnitude of the effect for
22	Cancer Institute?	22	hormone replacement therapy is modest
23	A. What is it?	23	with a relative risk of 1.2 to 1.8?
24	Q. Do you know who the National	24	A. Yes.

101 (Pages 398 to 401)

	Page 402		Page 404
1	Q. And obesity and height talks	1	don't think talc is listed here.
2	about, "Based on fair evidence, obesity	2	Q. I understand. Counsel
3	and height are associated with a modest	3	counsel can ask you this question. This
4	increase of ovarian cancer," which they	4	is not your opportunity to pontificate.
5	describe down below as a 1.1.	5	MR. LOCKE: Objection.
6	A. Yes. I see that.	6	MS. MILLER: Objection.
7	MS. MILLER: Can you	7	BY MR. TISI:
8	BY MR. TISI:	8	Q. Let's talk about consistency
9	Q. Are there so would you	9	and statistical significance now, because
10	would you agree with me that at least in	10	this is a big part of your report.
11	this document, that there are people who	11	Please pull out Exhibit 6,
12	define magnitude of risk of 1.1 to 1.2 as	12	which is the Bradford Hill article.
13	a modest risk?	13	A. Yes, I have.
14	MS. MILLER: Objection. Are	14	Q. On Page 8 it talks about
15	we talking about relative risks?	15	consistency. It says, "Next to my list."
16	Or are we talking	16	A. Yes.
17	MR. TISI: You can clarify,	17	Q. Okay. It does not say
18	Counsel. She's looking at it.	18	different designs, does it? Can you read
19	MS. MILLER: That's an	19	it for the record, please?
20	objectionable question.	20	A. Yes. It says, "Has it been
21	MR. TISI: Of course. Every	21	repeatedly observed by different persons
22	one of my questions is.	22	in different places, circumstances, and
23	MS. SHARKO: Exactly.	23	times?"
24	MS. MILLER: Fix that.	24	Q. Okay. It doesn't talk about
	Page 403		Page 405
1	THE WITNESS: So this has	1	study design, does it?
2	nothing to do with	2	A. I don't know. Circumstances
3	MS. MILLER: You have the	3	could fall under I mean, study design
4	power to change that.	4	could fall under circumstances.
5	MR. TISI: Every one of my	5	Q. It doesn't say anything
6	questions is. You've made that	6	about statistical significance, does it?
7	clear.	7	A. You know, I read where
8	THE WITNESS: This has	8	did I read
9	nothing to do with trying to	9	So it's going to take me a
10	identify what the strength of an	10	while to go through where he talks
11	association is within the context	11	about yeah, so the lesson here is
12	of a Bradford Hill.	12	that, "Broadly the same answer has been
13	BY MR. TISI:	13	reached in quite a wide variety of
14	Q. So is the Bradford	14	situations and techniques."
15	A. This is more, I think, for	15	So I would consider study
16	lay people. I mean, it says, "Who's at	16	design a technique. In other words, it's
17	risk?" I don't think this is for	17	not due to some constant error or fallacy
18	scientists.	18	that permeates every inquiry.
19	And so, you know, so I don't	19	Q. Okay. So now the next thing
20	know what their reference basis is. And	20	if I go to Page 17 of your report under
21	I note that	21	consistency, the second sentence.
22	Q. I have no question is	22	A. Under consistency.
23 24	pending.	23	Q. Right. It says I'll read
	A. Let me go through, but I	24	it into the record. "Results across

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	Page 406		Page 408
1	studies are consistent if the risk ratios	1	asking you one question at a time,
2	are numerically close to one another and	2	Doctor.
3	the results are statistically significant	3	A. I don't think it's a yes or
4	in most studies."	4	no answer.
5	A. Yes.	5	Q. Are you not criticizing
6	Q. Let's take each part.	6	them "Unfortunately, they do not
7	Numerically close to one another. First	7	indicate what is meant by relative
8	of all, there's no citation to that	8	stability. They did not provide a
9	whatsoever, is there?	9	definition."
10	A. Again, I mean, it's like	10	Do you see that?
11	what does consistency mean. Well, I	11	A. I did not say that they did
12	mean, it means that you have numbers that	12	not provide a cross
13	are close to each other. A number	13	Q. You say, "Unfortunately,
14	wouldn't be consistent if one is one and	14	they do not indicate what is meant by
15	another is 100. I think that's common	15	relative stability."
16	sense.	16	A. Right. I did not say
17	Q. Okay. Well okay.	17	definition.
18	A. And as well as, you know,	18	Q. Okay. Do you indicate what
19	results are statistically significant in	19	you mean by numerically close to one
20	most studies. Again, I think that's how	20	another
21	most people most epidemiologists would	21	A. So
22	interpret consistency.	22	Q on Page 17?
23	Q. Well, on Page 26 of the	23	MS. MILLER: Objection.
24	report, if you go there, you criticize	24	THE WITNESS: I I
	Page 407		Page 409
1	the plaintiffs' experts in another	1	that's where I was going. It's
2	context. You say, "Arguments have been	2	transfer I do have sort of
3	made by plaintiffs' experts that the	3	criteria where was it, Page 17?
4	results are consistent. Some experts	4	So when I apply the
5	emphasize what they see is a relative	5	criteria, I say how I apply it.
6	stability of the estimates across time,	6	And so I'm trying to look for that
7	diverse population, and across diverse	7	right now.
8	study designs. Unfortunately, they do	8	BY MR. TISI:
9	not indicate what is meant by relative	9	Q. No, I'm asking you the
10	stability."	10	general principles, Doctor. What is
11	Do you see that?	11	how do you define numerically close?
12	A. I'm sorry, no. I haven't	12	What is your definition and your
13	gotten there.	13	authority for that?
14	Q. It's the last paragraph.	14	A. Common sense. And I'm going
15	A. Yes. I see that.	15	to where I applied it, as the plaintiffs
16	Q. And you're critical of the	16	did not give this a definition in their
17	plaintiffs' experts for in the defining	17	sort of how to do consistency and their
18	the terms, right?	18	general setup of consistency, what I'm
19	A. But if you go on	19	saying is when they reported their
20	Q. I'm asking you a question.	20 21	results on consistency, they just make a
21 22	You're critical of plaintiffs' experts	21	statement that it's relatively stable,
23	for not defining their terms, correct? A. Can I finish?	23	but they don't even give an indication of what they mean by relatively stable.
24	Q. No, I'm asking you I'm	24	Q. And you don't think the
∠ ' ±	Q. 190, THI asking you THI	<u> </u>	Q. And you don't think the

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1 Q. You are really not answering 1 okay, here about consistency. This is 2 my question. 2 your general section, 5.1.2, correct? 3 Without regard to talc.	ybe
2 MS. MILLER: She's still 3 talking. 4 THE WITNESS: In my general 5 setup, I do not indicate. But I 6 do when I go through sort of the 7 consistency evaluation, I do give 8 magnitudes of the ranges that were 9 reported in the case-control 10 studies that are almost fourfold 11 different. 12 BY MR. TISI: 13 Q. I understand. 14 A. Versus well, that's 15 what you asked me about consistency. 16 Q. No. But I'm asking you 17 where you no, but I'm asking you 18 A. And that's how I 19 Q. You're not answering my 20 question. 21 MS. MILLER: Stop talking 22 analysis I'm answering. 3 BY MR. TISI: 4 Q. You are not 4 MS. MILLER: Let her finish 4 Q. You are not answering my 4 question with all due respect. 8 Q. You are not answering my 4 question with all due respect. 9 WR. TISI: 10 MS. SHARKO: You haven't heard her whole answer. 11 MS. MILLER: Maybe may heave you wanted. 12 MR. TISI: This is 13 MS. MILLER: Maybe may heave you wanted. 14 A. Versus well, that's 15 what you asked me about consistency. 16 Q. No. But I'm asking you 16 MR. TISI: This is 17 MS. MILLER: You have to her finish talking. 19 BY MR. TISI: 20 Q. This is you provide 21 MS. MILLER: Stop talking 22 over each other. Let her finish 22 my question. 23 BY MR. TISI: 24 BY MR. TISI: 25 A G. You are not answering my 26 question with all due 27 A G. You provide a statement, 28 Page 411 29 Q. You are really not answering 20 Q. You provide a statement, 21 Oc. You are really not answering 22 my question. 23 Octor, with all due 24 Octor, with all due 25 Octor, with all due 26 Octor, with all due 27 Octor, with all due 28 Without regard to talc.	ybe
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THE WITNESS: In my general setup, I do not indicate. But I do when I go through sort of the consistency evaluation, I do give magnitudes of the ranges that were reported in the case-control studies that are almost fourfold 10 studies that are almost fourfold 11 different. 11 heard her whole answer. MR. TISI: MR. TISI: 12 MR. TISI: This is MS. MILLER: Maybe magnitudes what you asked me about consistency. 15 answer you wanted. 16 Q. No. But I'm asking you 16 MR. TISI: This is MS. MILLER: You have to her finish talking. 19 Q. You're not answering my 19 BY MR. TISI: 18 her sentence. 21 MS. MILLER: Stop talking 21 MS. MILLER: You don't let me talk either. 23 her sentence. 24 BY MR. TISI: 24 Q. You general section, 5.1.2, correct? 3 Without regard to talc.	ybe
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3 Doctor, with all due 3 Without regard to talc.	
,	
4 respect, and I because I think it's 4 A. I I say I provide a	
5 important here. I want to know what your 5 general statement there.	
6 definition is of numerically close, and I 6 Q. Okay. And your general	
7 want to know where you get it from. 7 statement is that numerically close	
8 A. So I think this is a bit 8 A. Yes.	
9 unfair. You're asking me for a 9 Q. Okay. You use numerically	
10 definition of numerically close. And 10 close. And I want to know where of	
when I just sort of give a general 11 than you said common sense and ges	
12 gestalt of what's meant by consistency. 12 okay, those are your two things, kind	
And then you're saying but 13 like the sniff test that you used in	
14 you criticize the other plaintiffs' 14 Viagra, right?	
15 experts because they don't say what 15 MR. LOCKE: Objection.	
16 relatively stable is. And their 16 BY MR. TISI:	
17 statements are in terms of when they 17 Q. I want to know where your	
18 looked at consistency, not a definition 18 where your	
19 of consistency. 19 MS. MILLER: He wasn't do	ne
20 So I'm saying let's look and 20 with the question. I was going to	_
21 I'll show you why I say they're not 21 object. Don't worry.	
22 consistent. And when I invoke 22 BY MR. TISI:	
23 Q. But you're not answering. 23 Q. Okay. Then let me back up	
MS. MILLER: Let her finish. 24 You remember the sniff test that you)

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	Page 414		Page 416
1	in Viagra, right?	1	conclusion, versus the plaintiffs'
2	MS. MILLER: Objection.	2	experts, which just say they're
3	THE WITNESS: I don't	3	relatively stable.
4	remember exactly how I used it. I	4	BY MR. TISI:
5	do remember using those terms.	5	Q. Okay. Let me do the next
6	BY MR. TISI:	6	one. Last paragraph in the consistency
7	Q. Right. So this is the	7	section, last I'm going to read it
8	gestalt test or the common sense test	8	into the record. It's the first
9	that you used.	9	paragraph.
10	MS. MILLER: Objection.	10	"However"
11	BY MR. TISI:	11	MS. MILLER: You said last
12	Q. I want to know exactly where	12	paragraph. Then you said first
13	you get your cut-off for what is	13	paragraph.
14	numerically close for the consistency	14	BY MR. TISI:
15	prong of Bradford Hill?	15	Q. First paragraph, last couple
16	MR. LOCKE: Objection.	16	sentences.
17	THE WITNESS: You know what,	17	Tell me where you are. Are
18	again, it all depends upon the	18	you with me, Doctor? Right here.
19	situation. And that's why there's	19	Consistency. Page 17.
20	no solid number within the	20	A. No, I was on 24. Yes.
21	definition for the general thing.	21	Q. Okay. You say I'll read
22	You also then brought up	22	it into the record. "However, if
23	and that's what I'm trying to get	23	adequately powered studies do not achieve
24	the whole truth out there, is I	24	statistical significance, this is
	Page 415		Page 417
1	criticize the plaintiffs' experts	1	evidence of inconsistency."
2	by saying relatively stable	2	Do you stand by that
3	without giving any sort of	3	statement, first of all?
4	indication.	4	A. However if adequately
5	But their relatively stable	5	powered studies do not achieve
6	was just in their conclusion that	6	statistical significance Yes.
7	they're consistent, whereas when I	7	Q. Okay. Next thing. "Another
8	look at the consistency analyses,	8	way an inconsistency can rise is if
9	I give more numbers and ranges as	9	95 percent confidence intervals for the
10	to why I believe those numbers are	10	risk ratio estimates have no to little
11	not consistent.	11	overlap with one another for adequately
12	BY MR. TISI:	12	powered studies. If one study has a
13	Q. Right. But that's your	13	statistically significant result and the
14	opinion. You don't give any basis for	14	other does not, it means that the
15	it. You don't give any citation. You	15	magnitude of the relative risk differs
16	don't give any published peer-reviewed	16	considerably, which is an inconsistency
17	literature which would against which	17	between the size of the estimated risk.
18	we could measure your opinion, do you?	18	Do you see that?
19	MS. MILLER: Objection.	19	A. I do see that.
20	THE WITNESS: There wouldn't	20	Q. Okay. Can you tell me
21	be any published peer-reviewed	21	what how you define no to little
22	literature that would say that.	22	overlap? What's the what's the
23	But I am I'm giving my criteria	23 24	criteria for that and where do you get it
24	and metrics and how I came to my		from?

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	Page 418		Page 420
1	First of all, there's no	1	2016 and again just this week have
2	citation for any of this, is there?	2	indicated that statistical significance
3	MS. MILLER: Objection.	3	should not even be should not even be
4	First of all, so what is	4	mentioned when we are talking about
5	MR. TISI: I was	5	analyses like these, true?
6	MS. MILLER: You can't ask a	6	MR. LOCKE: Objection.
7	question that way.	7	MS. MILLER: Objection.
8	MR. TISI: Counsel, I said	8	THE WITNESS: I have no idea
9	first of all, there is	9	what it's referring to. But let
10	MS. MILLER: Is the first	10	me let me sort of explain to
11	question stricken?	11	you the relationship between
12	MR. TISI: Yes.	12	statistical significance and
13	MS. MILLER: Okay.	13	confidence intervals.
14	BY MR. TISI:	14	If one has a confidence
15	Q. First of all, in the second	15	interval, one can infer whether or
16	part of the paragraph you do not provide	16	not a result is statistically
17	a single citation, correct?	17	significant at a certain level.
18	A. I do not provide a citation	18	So one can sort of infer if
19	there.	19	the P-value is going to be less
20		20	5 5
21	Q. Okay. Secondly okay, can	21	than or greater than .05 if you're
22	you tell me what you mean by no to little	22	using a 95 percent confidence interval.
23	overlap? What is the criteria and where	23	
24	do you get it from?	24	So the reason they're saying
24	A. That's was what I was trying	24	this, and I tell this people all
	Page 419		Page 421
1	to answer. I'm trying to see if I have	1	the time when I teach, I never
2	that citation here. And if I don't, I	2	just want to see a P-value, I want
3	can provide a citation. No, I don't	3	the magnitude of the difference.
4	provide a citation there. But in the	4	I want to know what is the
5	literature, there are articles that state	5	size of the difference and a
6	how much in fact, confidence intervals	6	confidence interval on that, and I
7	can overlap and the results still are	7	would agree. I don't need the
8	statistically significantly different.	8	P-value.
9	Q. In fact, Doctor and we're	9	BY MR. TISI:
10	going to talk about this. Aren't you	10	Q. And
11	aware that even this week, the American	11	A. And I could infer
12	Statistical Association published a	12	statistical significance just based upon
13	whole a whole volume of 43 articles	13	the confidence interval.
14	with an editorial recommending that they	14	So they are not saying don't
15	get rid of the issue of statistical	15	worry about statistical significance.
16	significance and look at confidence	16	They are saying don't place so much
17	intervals?	17	emphasis on the P-value itself.
18	A. Well, that's what I'm citing	18	Q. But also we're going to
19	there, that one can look at confidence	19	talk about this for a moment. You would
20	intervals and see if they overlap or not.	20	agree that almost all of these studies
21	Q. Perfect. And we're going to	21	with a handful of exceptions, regardless
22	talk about that. Okay?	22	of study design, their confidence
	But you do understand that	23	intervals overlap at 1.2?
23			

106 (Pages 418 to 421)

	Page 422		Page 424
1 Q. We'll talk	about that	1	expert reports of any of the other
_	ER: Do you need a	2	defense experts in this case?
3 break?	Erc. Do you need a	3	A. Other defense experts?
	IESS: No, I'm good.	4	Q. Have you read Christian
5 BY MR. TISI:	LDD. 140, 1111 good.	5	Merlo's?
	6, you say the	6	A. Yes, I have.
-		7	· · · · · · · · · · · · · · · · · · ·
		8	Q. Did you have any problems
		9	with his report?
9 inconsistency" Pa	•	l	A. Problems? What do you mean
10 A. Yeah, I'm		10	by problems.
11 seeing where that st	atement or where	11	Q. Anything that you thought
12 that		12	was wrong?
_	entence of the	13	A. I wasn't evaluating whether
14 paragraph in the mi		14	or not I agree or disagree with his
15 A. Okay. I'm		15	report.
_	ear inconsistency	16	Q. I'm going to show you a
17 between different st		17	chart that he put in his report because
18 case-control studies		18	you don't have one in yours. And I will
19 statistically signification		19	stipulate that it is accurate to the
20 ranging from 1.26 to	o 1.35 and cohort	20	extent that it is
21 studies yielding a ne	onstatistically	21	A. Comes from his report?
22 significant associati	on ranging from 1.02	22	Q. I'm going to ask you to
23 to 1.06, hence no ev	vidence of a causal	23	assume that it comes from his report and
24 relationship because	e the results are	24	I'm going to use his numbers.
	Page 423		Page 425
1 inconsistent."		1	MS. MILLER: I'll check my
2 Do you say	that?	2	laptop to make sure that's true.
3 A. I do.		3	(Document marked for
	d so you think that	4	identification as Exhibit
5 because these two s		5	Ballman-26.)
6 one is statistically s		6	BY MR. TISI:
7 is not statistically si	•	7	Q. Do you remember seeing this
8 are inconsistent?	giirreant, they	8	chart?
	ER: Objection.	9	A. I was expecting a Forest
	JESS: I'm saying	10	plot. Yes, I see this chart here. I've
11 that one set of i	• •	11	seen so many charts that if this comes
	association that's	12	from his study, yes, I believe
13 statistically sign		13	Q. And I'm using his because
	her one is saying	14	I'm sure the defense would object to me
, ,	ciation because	15	using anything else but their evidence.
16 this is no statist		16	I'm using your evidence, and I'm putting
17 significance.	.icai	17	it in front of you. Okay?
18 BY MR. TISI:		18	MS. MILLER: Objection.
	w vou didn't put o	19	BY MR. TISI:
	w, you didn't put a	20	
_	udies iii youi	20	Q. And I'm asking you to assume
21 report, did you?	hama ia na Earast		it's true.
	here is no Forest	22	MS. MILLER: If there's a
23 plot.		23	statement there, I'm objecting.
24 Q. Okay. Ha	ve you reviewed the	24	If there's a question there, I'm

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	Page 426		Page 428
1	objecting. If there's a statement	1	statistically statistical significance
2	there, I don't know what the point	2	issue, you would agree with me for the
3	of it was.	3	hospital case-control studies with the
4	BY MR. TISI:	4	exception of the two Hartge papers, all
5	Q. There are 30 observational	5	show a risk ratio greater than one?
6	studies here. And he identified them as	6	A. The two Hartge pages?
7	hospital-based case-control,	7	Q. Yes.
8	population-based case-controls, pooled	8	A. Yes. That's what it's
9	case-control studies, and cohort studies,	9	showing here.
10	correct?	10	Q. Okay. You would also agree
11	A. Yes, that's	11	with me that the population based
12	MR. LOCKE: Objection.	12	case-control studies, every single one of
13	Before you answer that question, I	13	them, whether they were statistically
14	don't have a copy of what you're	14	significant or not, had a risk ratio of
15	looking at.	15	greater than one.
16	MR. TISI: Oh, I'm sorry.	16	MS. MILLER: Objection.
17	MS. MILLER: Wait. I'm	17	THE WITNESS: In this chart
18	sorry. Did you just read us a	18	that is true.
19	sentence?	19	BY MR. TISI:
20	THE WITNESS: No, he was	20	Q. Okay. The pooled
21	MR. TISI: They're	21	case-control study, Terry had a risk
22	categorized. No, it's not.	22	ratio great]er than one?
23	They're categorized. One,	23	A. That's true. That's what
24	hospital based case-control	24	this
	•		
	Page 427		Page 429
1		1	_
1 2	studies, population based	1 2	Q. As was as is Cramer on
		l .	_
2	studies, population based case-control studies MS. MILLER: You talked so	2	Q. As was as is Cramer on the next page? A. Yes.
2 3	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading	2 3	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all
2 3 4	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have.	2 3 4	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the
2 3 4 5	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were	2 3 4 5	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all
2 3 4 5 6	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have.	2 3 4 5 6	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me,
2 3 4 5 6 7	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it.	2 3 4 5 6 7	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct.
2 3 4 5 6 7 8	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI:	2 3 4 5 6 7 8	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me,
2 3 4 5 6 7 8 9 10	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct?	2 3 4 5 6 7 8 9 10	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as
2 3 4 5 6 7 8 9 10 11 12	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart,	2 3 4 5 6 7 8 9 10 11	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct?
2 3 4 5 6 7 8 9 10 11 12 13	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart.	2 3 4 5 6 7 8 9 10 11 12	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates.
2 3 4 5 6 7 8 9 10 11 12 13 14	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories	2 3 4 5 6 7 8 9 10 11 12 13	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just
2 3 4 5 6 7 8 9 10 11 12 13 14 15	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they are all there or if any extra or there.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how would you describe it?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they are all there or if any extra or there. But yes, in general.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how would you describe it? A. I would say that what a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they are all there or if any extra or there. But yes, in general. Q. Okay. Now, would you agree	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how would you describe it? A. I would say that what a confidence interval shows, and this is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they are all there or if any extra or there. But yes, in general. Q. Okay. Now, would you agree that irrespective of and I'm going to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how would you describe it? A. I would say that what a confidence interval shows, and this is why people hate statistics, is that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	studies, population based case-control studies MS. MILLER: You talked so fast, I thought you were reading something that I didn't have. I didn't realize you were MR. TISI: I am reading it. BY MR. TISI: Q. Okay. There are four categories of studies in this chart, correct? A. Yes, he lists four categories of studies in the chart. Q. And these four categories are these studies are studies you recognize, correct? A. Yes. I recognize studies that I reviewed. I don't know if they are all there or if any extra or there. But yes, in general. Q. Okay. Now, would you agree	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. As was as is Cramer on the next page? A. Yes. Q. And the cohort studies all had risk ratios greater than one with the exception of Gonzalez, correct? A. Yes, that's correct. Q. And would you agree with me, risk ratio, the RR, is the same thing as the point estimate, correct? A. Yeah. Either it's an odds ratio or it's a relative risk. But they are point estimates. Q. And the point estimate, just for anybody going to read this, is the most likely place where the risk resides? A. It's more subtle than that. Q. Okay. But just well, how would you describe it? A. I would say that what a confidence interval shows, and this is

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	Page 430		Page 432
	•		
1	MS. SHARKO: That's someone	1	before, Gonzalez, the cohort study,
2	who loves statistics.	2	and the two Hartge studies, that all of
3	MR. TISI: Troy Rafferty was	3	the risk ratios here show a positive risk
4	calling to you.	4	ratio greater than one?
5	MS. SHARKO: I'm happy to	5	MS. MILLER: Objection.
6	talk with Troy.	6	THE WITNESS: As we
7	THE WITNESS: Sorry. I was	7	mentioned, most of the numbers
8	trying to concentrate.	8	here are bigger than one.
9	MS. MILLER: Yeah, that's	9	BY MR. TISI:
10	not fair to Dr. Ballman. Should	10	Q. Okay. And that's what we
11	we the banter has confused her.	11	call a positive association, a positive
12	Should we go back and hear the	12	risk ratio?
13	question again.	13	MS. MILLER: Objection.
14	BY MR. TISI:	14	THE WITNESS: Well, I think
15	Q. Yeah. My question my	15	that
16	question is, what is your definition of a	16	BY MR. TISI:
17	point estimate.	17	Q. Putting statistical
18	Actually, let me let	18	significance aside for a moment. I'll
19	me actually, that was not the	19	talk about statistical significance.
20	question. The question was, the point	20	A. Yeah, but I think it's
21	estimate is the place within the	21	important. I think one would not say
22	confidence interval that it's most likely	22	there's a positive association if it's
23	to be the true risk?	23	not statistically significant. I mean,
24	A. No, that's not correct.	24	it depends upon the context in which he
	Page 431		Page 433
1	Q. Okay. Well, what is it?	1	was saying, so that might be misleading.
2	A. So it's just the point	2	I mean, you know, a lot of people might
3	estimate that comes on based on the	3	say, oh, they said there's a positive
4	actual data that you have on hand and	4	association, and they would assume that
5	that you calculated. And it's for that	5	it was statistically significant.
6	data.	6	Q. I understand. And we're
7	And a confidence interval is	7	going to talk about statistical
8	the interval such that if you would redo	8	significance in a moment. But I'm asking
9	the study with a different random set,	9	you, all of these numbers with the
10	selected exactly the same way, many, many	10	exception of the ones that I mentioned,
11	times 95 percent of those intervals would	11	the two Houghton studies and the Gonzalez
12	contain the real risk ratio.	12	cohort study, show a positive risk ratio?
13	Q. And is the number that is	13	MS. MILLER: Objection.
14	reported, the risk ratio, more likely or	14	THE WITNESS: I mean, that's
15	less likely than the number that's at the	15	one thing, yes, here in the study.
16	tails?	16	BY MR. TISI:
17	A. I don't know how you would	17	Q. Okay.
18	measure that necessarily. Because you	18	A. Risk ratios that are you
19	have no idea what truth is. So you have	19	know, rated as weak, or no risk no
20	no idea within a given confidence	20	significant association.
21	interval where the real estimate lies.	21	Q. Okay. Now, I'm going to ask
22	Q. But you would agree with me	22	you a hypothetical. If every one of
23	that that all of these studies with	23	these studies was statistically
24	the exceptions that we talked about	24	significant instead of some of them yes,

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	Page 434		Page 436
1	some of them no, would you find	1	that. I'm allowed to ask you
2	consistency?	2	hypotheticals.
3	MS. MILLER: Objection.	3	Okay. So my hypothetical is
4	THE WITNESS: If every what?	4	that this chart this chart is exactly
5	BY MR. TISI:	5	as it is, except in the right-hand
6	Q. If every one	6	column, there would be let's say
7	A. That that's not but	7	let's call them all weak associations.
8	that's not the case.	8	Let's call them all weak but they would
9	Q. I understand. This is a	9	all be statistically significant.
10	hypothetical. And I'm allowed to ask	10	If that were to change,
11	hypotheticals.	11	would those, in your opinion, be
12	If this chart were that	12	consistent?
13	every one of these results were	13	MS. MILLER: Objection.
14	statistically significant, would that	14	THE WITNESS: I think it
15	would those be consistent in your	15	depends. And I think there
16	opinion?	16	wouldn't be agreement in terms of
17	MS. MILLER: Objection.	17	what the actual association is,
18	THE WITNESS: Again, I mean,	18	which would be quite weird. And
19	I would have to look at the	19	the fact that, you know, in
20	ranges. They said it's just	20	general, the cohort studies have
21	magnitude. And then even	21	much lower estimates than do the
22	furthermore, you know, the next	22	case-control studies.
23	step then would be consistent	23	BY MR. TISI:
24	what, and consistently biased,	24	Q. So is your answer they would
	Page 435		Page 437
1	because these are all population	1	be inconsistent?
2	studies, and hence that's probably	2	A. I am saying it depends in
3	why	3	this hypothetical situation. I mean, I
4	BY MR. TISI:	4	would have to look at it more carefully
5	Q. Well, no. There are cohort	5	and do an analysis to see
6	studies in there. There's	6	Q. Would you
7	hospital-based. If all of these studies,	7	A because that wasn't the
8	regardless of design, was statistically	8	analyses that I did. I did the analyses
9	significant and the risk ratios were the	9	on on these observed results.
10	same, would they be consistent in your	10	Q. Okay. Would you agree that
11	opinion?	11	most of these risk ratios are between
12	A. You know, again, I would	12	approximately 1.1, some higher, some
13	have to see what the actual numbers	13	lower, and 1.5?
14	were	14	A. No. There are some that's
15	Q. These are the numbers.	15	3.9, I see.
16	A and so forth.	16	Q. Well, so my next point
17	Q. These are the numbers.	17	A. You know that's for
18	A. But yeah, but you're	18	concerning. 2.49.
19	asking me to hypothesize something on	19	Q. Right.
20	numbers that did not yield statistically	20	A. I see a .7. I see a .3.
21	significant results.	21	Q. I said most of them. Most
22	Q. I understand. I'm	22	of most of them are in the range of
23	allowed I'm allowed to do that. I	23	1.1 to 1.5. Not all of them. I
24	really and your lawyers will tell you	24	wasn't I was clear about that.

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	Page 438		Page 440
1	A. Well, you're right.	1	THE VIDEOGRAPHER: All
2	MS. MILLER: Objection.	2	right. The time is 3:35 p.m. off
3	Wait, is that a question?	3	the record.
4	MR. TISI: Yes.	4	(Short break.)
5	BY MR. TISI:	5	THE VIDEOGRAPHER: We are
6	Q. I'm asking you	6	back on the record. The time is
7	MS. MILLER: Or just a	7	3:51 p.m.
8	statement? That's a statement.	8	BY MR. TISI:
9	BY MR. TISI:	9	Q. Doctor, we were talking
10	Q. I'm asking you, were are	10	before the break about role of
11	most most of these results are between	11	statistical significance and the issue of
12	1.1 and 1.5, true?	12	consistency. Do you remember that?
13	A. So I would say that the	13	A. I know that we were talking
14	statement you made, however you define	14	about consistency and statistical
15	most, I'm not quite sure, look like that	15	significance, yes.
16	could be true, yes.	16	Q. Okay. I'm going to hand you
17	MS. MILLER: Is this a good	17	another chapter from Rothman's textbook.
18	time for a break?	18	I'll have that marked as the
19	MR. TISI: Let me just	19	next exhibit.
20	THE WITNESS: Yeah.	20	MR. SOILEAU: Which will be
21	MS. MILLER: My head is	21	27.
22	pounding.	22	(Document marked for
23	THE WITNESS: So is mine,	23	identification as Exhibit
24	actually.	24	Ballman-27.)
	Page 439		D 441
	rage 439		Page 441
1	MS. MILLER: Soon as the	1	BY MR. TISI:
1 2	MS. MILLER: Soon as the	1 2	BY MR. TISI:
	MS. MILLER: Soon as the statistics started my head started		-
2	MS. MILLER: Soon as the	2	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on
2 3	MS. MILLER: Soon as the statistics started my head started hurting.	2 3	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill
2 3 4	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just	2 3 4	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on
2 3 4 5	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one	2 3 4 5	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30.
2 3 4 5 6	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure.	2 3 4 5 6	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength.
2 3 4 5 6 7	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind.	2 3 4 5 6 7	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section
2 3 4 5 6 7 8 9	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page	2 3 4 5 6 7 8 9	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you
2 3 4 5 6 7 8 9 10	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately	2 3 4 5 6 7 8 9 10	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a
2 3 4 5 6 7 8 9 10 11 12	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve	2 3 4 5 6 7 8 9 10 11	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based
2 3 4 5 6 7 8 9 10 11 12 13	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is	2 3 4 5 6 7 8 9 10 11 12 13	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints
2 3 4 5 6 7 8 9 10 11 12 13 14	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency."	2 3 4 5 6 7 8 9 10 11 12 13	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's
2 3 4 5 6 7 8 9 10 11 12 13 14 15	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true? A. I am, or you could put it	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes through the nine aspects. I'm just
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true? A. I am, or you could put it another way and say that all of the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes through the nine aspects. I'm just orienting you here. There's a section on
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true? A. I am, or you could put it another way and say that all of the adequately powered studies would have to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes through the nine aspects. I'm just orienting you here. There's a section on consistency.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true? A. I am, or you could put it another way and say that all of the adequately powered studies would have to have as their lower bound above 1.0.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes through the nine aspects. I'm just orienting you here. There's a section on consistency. Do you see that?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Soon as the statistics started my head started hurting. MR. TISI: Let me just let me just finish this, like, one or two sentences, if you don't mind. MS. MILLER: Sure. BY MR. TISI: Q. Now, you said before on Page 17 on Page 17, "However, adequately powered studies do not achieve statistical significance, that is evidence of inconsistency." A. That is correct. Q. So you are relying on the statistically significant metric as part of your analysis of consistency, true? A. I am, or you could put it another way and say that all of the adequately powered studies would have to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. TISI: Q. Give that to your counsel. Now, there is a section here on consistency in the Bradford Hill criteria, and it starts on Page 25 of 30. Do you see that? A. So causal criteria is on this page, and strength. Q. Correct. That's the section that talks about Bradford Hill. Do you see that? He refers to Bradford Hill, a commonly used set of criteria was based on a list of considerations or viewpoints composed by Sir Bradford Hill. That's the second paragraph there. Do you see that? A. Yes, I do. Q. Okay. And he then goes through the nine aspects. I'm just orienting you here. There's a section on consistency.

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	Page 442		Page 444
1		1	
1 2	it if you want. It's only two	1 2	studies for power in the talc litigation? A. I did not.
3	paragraphs. But I'm going to focus on	3	Q. You did not. So you don't
	the second paragraph. First of all, consistency is not a necessary criteria	4	- ·
4 5	according to Dr. Rothman, right?	5	know whether they were adequately powered or not, do you?
6	MS. MILLER: Have you read	6	A. I I did not go through
7	this?	7	and do a powered calculation for the
8	THE WITNESS: No, I'm still	8	studies.
9	reading. Okay, I've read it.	9	Q. So you can't determine
10	BY MR. TISI:	10	whether or not you applied that rule
11	Q. Okay. Does he not say, in	11	correctly because you don't know whether
12	the second paragraph, "One mistake in	12	or not these were adequately powered
13	implementing the consistency criterion is	13	studies or not, do you?
14	so common it deserves special attention.	14	A. I don't know if it was a
15	It is sometimes claimed that a literature	15	rule. I'm just saying that this is one
16	or set of results is inconsistent simply	16	aspect of consistency. That's what I
17	because some results are statistically	17	said.
18	significant and some are not.	18	Q. Okay. So do you agree with
19	"This sort of evaluation is	19	Dr Dr. Rothman that just because some
20	completely fallacious, even if one	20	studies are not statistically significant
21	accepts the use of significance testing	21	and others are, it does not make them
22	methods."	22	inconsistent?
23	Did I read that correctly,	23	A. So what is adequately
24	first of all?	24	powered is if one does a meta-analyses of
	Page 443		Page 445
1			
1	A. That is what it says.	1	all the case-control studies and one does
2	Q. Okay. Do you agree with that?	2 3	a meta-analyses of all the cohort
3 4		4	studies.
5	A. So it also says thatQ. I'm asking whether you agree	5	Q. I didn't ask you that
6	Q. I'm asking whether you agree with that statement. Okay. Do you agree	6	question, respectfully. Okay. My question was
7	with it?	7	MS. MILLER: Try not to
8	A. Well, I do not agree with	8	interrupt her.
9	it. And I'm going to explain why.	9	BY MR. TISI:
10	Q. Okay.	10	Q. Do you agree
11	A. It goes on to well, it	11	MS. MILLER: It's so tiring.
12	says that I agree with it in some	12	MR. TISI: No, it is
13	sense. In the sense that the results	13	listening to her speechify is
14	effect estimates from a set of studies	14	really disrupting.
15	could all be identical even if they	15	MS. MILLER: That's the pot
16	many were many were significant and	16	calling the kettle black.
17	many were not, the difference in	17	BY MR. TISI:
18	significance arising solely because of	18	Q. Do you agree with
19	differences in the standard error or	19	Dr. Rothman that because some studies are
20	sizes of the study.	20	not statistically significant and others
21	And if you recall, I said	21	are, it does not make them inconsistent?
22	adequately powered studies, which is what	22	Do you agree with that statement as a
23	he made this statement here.	23	general proposition?
24	Q. Did you analyze each of the	24	MR. LOCKE: Objection.

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	Page 446		Page 448
1		1	A. No. That's not what I'd
1 2	THE WITNESS: It depends. BY MR. TISI:	2	
		3	done. I would like some time please to
3	Q. Okay. And it depends upon		read the rest of this.
4	the power, correct?	4	Q. Sure.
5	A. No. It depends upon the	5	A. He does say, "Focusing on
6	situation, as I was trying to explain and	6	the magnitude"
7	you wouldn't let me finish.	7	Q. Just I thought you were
8	Q. Okay. Does it depend upon	8	going to read the whole I thought you
9	the power of the study to detect an	9	were going to read the whole thing.
10	association?	10	Let's read the whole thing and we can
11	A. You mean a statistically	11	talk about it. Thank you.
12	significant association?	12	A. Okay.
13	Q. Yes.	13	MS. MILLER: It would be
14	A. That is what power is about.	14	really nice if you would not talk
15	Q. Correct. Okay. The study,	15	over the witness.
16	each study has to be powered to find the	16	MR. TISI: It would be
17	association, correct, adequately powered?	17	really nice if she'd
18	A. No. Just because a study is	18	MS. MILLER: It's especially
19	adequately powered, it could not find an	19	offensive for the way you are
20	association because there really is no	20	talking to her.
21	real relationship there.	21	MR. TISI: Okay. You know,
22	Q. Let's go to Exhibit Number	22	I find it offensive that a witness
23	23. Again, this was Dr. Rothman's six	23	would come in here, and I ask her
24	misconceptions.	24	whether or not this pen is red and
	Page 447		Page 449
1	A. Yes. 20.	1	she talks about all the reasons
2	Q. Exhibit 20. I'm sorry. Go	2	why the blue pen down the table is
3	to Misconception Number 6. Can you read	3	blue. Okay. I find that
4	what it is?	4	offensive. That's not the way
5	A. Okay.	5	this works.
6	Q. Could you read could you	6	MR. LOCKE: Objection.
7	read it for the record, Misconception	7	MS. SHARKO: That's not what
8	Number 6?	8	happened. That's not what just
9	A. Oh, read it out loud?	9	happened.
10	Q. Yes.	10	MS. MILLER: You just kicked
11	A. Just that piece?	11	me again. I hope you're not doing
12	Q. Just what the misconception	12	that on purpose.
13	is, and we can talk about what he says.	13	MR. TISI: I'm definitely
14	A. Okay. It says,	14	not doing it on purpose. I would
15	"Misconception 6. Significance testing	15	not do that. And you kicked me
16	is useful and important for the	16	before, and I said nothing about
17	interpretation of data."	17	it.
18	Q. Okay. Is that what isn't	18	MS. MILLER: I don't think
19	that what you've done here, is you've	19	my legs are long enough.
20	looked at, you've looked at which studies	20	MR. TISI: Well, if they
21	are statistically significant and which	21	aren't long enough, how did I
22		22	THE WITNESS: Okay. Is
	ones aren't, and you've said that they		•
	ware inconcictant and therefore you did		
23	were inconsistent and, therefore, you did not find inconsistency?	23 24	there a question? BY MR. TISI:

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	Page 450		Page 452
1	Q. Yes. So my question is,	1	Q. All right. Both of those if
2	Doctor, didn't you wasn't the issue of	2	you're just looking at the risk ratios
3	which studies were statistically	3	are positive, correct?
4	significant and which ones weren't,	4	MR. LOCKE: Objection.
5	wasn't that an important factor in your	5	BY MR. TISI:
6	discussion of the talc studies in the	6	Q. 1.02 to 1.06 is a positive
7	context of the consistency aspect of	7	risk ratio, correct?
8	Bradford Hill?	8	MS. MILLER: Objection.
9	MR. LOCKE: Objection.	9	THE WITNESS: But but
10	THE WITNESS: So when I	10	they are positive. But again, I
11	looked at the analyses for	11	don't see where this is playing
12	consistency, just for sake of	12	into
13	argument, to go through this	13	BY MR. TISI:
14		14	
15	quickly, let's I look at the the meta-analyses of the	15	Q. I'm asking you the question. Okay. The difference is one is
16	•	16	· ·
17	case-control studies, which is	17	statistically significant result and the
18	statistically significant. I looked at the	18	other one is not. And you make a point
19		19	of that in this sentence, correct?
20	meta-analyses of the cohort	20	A. And that follows the point I
21	studies, which show no significant association. And that is an	21	made above, which also plays into my
22		22	consistency is that Berge found there was
23	inconsistency.	23	a statistically significant different
	BY MR. TISI:	24	association for the perineal talc
24	Q. Okay. So the determining	24	powder or perineal/genital talc powder
	Page 451		Page 453
1	factor, because even the cohort studies	1	exposure and ovarian cancer between the
2	had a positive risk ratio, correct?	2	case-control studies and the cohort
3	A. I don't know why that plays	3	studies.
4	into anything.	4	Q. And he's looking at
5	Q. Well, okay. They both	5	P-values, right. P07?
6	showed a positive they were in your	6	A. Yeah. He is looking at
7	report on Page 26. It was 1.02 to 1.06,	7	P-values, and that is what most of
8	whereas the statistically significant	8	medical literature does and bases their
9	results from the case-control studies	9	evidence on.
10	were 1.26 to 1.35.	10	And I looked and then I
11	MS. MILLER: When you say	11	look at the magnitude of the differences
12	"they both," what are you	12	between the two, and I do see that they
13	referring to?	13	are different.
14	BY MR. TISI:	14	Q. Did you look to see whether
15	Q. Okay. On Page 26 of your	15	the confidence intervals overlapped?
16	report, you say, "There is clear	16	A. What confidence intervals?
17	inconsistency between different study	17	Q. Well, if you go above. The
18	designs with the case-control studies	18	same results here, if you go above in
19	yielding a statistically significant	19	your paragraph, it says 1.26, 95 percent
20	association ranging from 1.26 to 1.35,	20	confidence interval 1.17 to 1.35.
21	and cohort studies yielding a	21	Do you see that? You're
22	nonstatistically significant association	22	basically talking about the same dataset.
23	ranging from 1.02 to 1.06, correct?	23	A. What do you mean the same
24	A. That is what it says there.	24	dataset?

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	Daga 454	1	Dama 450
	Page 454		Page 456
1	Q. If you go above, you said	1	page of
2	1.26 to 1.35. But above, you're	2	Q. At the page on the
3	including the confidence intervals,	3	last page.
4	correct?	4	A. In the conclusions?
5	A. Yes.	5	Q. Yeah, 102 10
6	Q. Okay. The confidence	6	A. Okay. I'm sorry. I didn't
7	intervals for all of those results cross	7	understand.
8	1.2, for each and every one of them,	8	Q. No, that's fine. I should
9	don't they?	9	have oriented you. I apologize.
10	A. I don't know how that's	10	A. So the last sentence in the
11	relevant.	11	conclusion?
12	Q. I know you don't. I'm	12	Q. Right. And I'll read it.
13	asking you do they all cross 1.2? Do all	13	A. Okay.
14	the confidence intervals for every one of	14	Q. "Why do such important
15	these risk ratios have 1.2 in the	15	misconceptions about research"
16	confidence interval?	16	A. Wait, wait, the last
17	A. Well, I don't know what you	17	sentence in the conclusion? Mine says
18	mean by in. The one from 1.02 goes from	18	to the extent
19	.85 to 1.2. I suppose you could call	19	Q. I'm on the conclusions. I'm
20	that in it.	20	on the conclusions. The very
21	But, yeah, if you look at	21	A. Oh, the first sentence.
22	ranges, other than the one that it's on	22	Yes.
23	the actual point, the ranges would	23	Q. "Why do such important
24	contain 1.2.	24	misconceptions about research persist?
	Page 455		Page 457
1	Q. Okay. So all of these	1	To a large extent these misconceptions
2	reports are consistent in that the	2	represent substitutes for more thoughtful
3	confidence intervals include 1.2, would	3	and difficult tasks. It's simpler to
4	you agree with that?	4	resolve a discrepancy between a trial and
5	MR. LOCKE: Objection.	5	a non-experimental study in favor of a
6	THE WITNESS: No I would not	6	trial without undertaking a laborious
7	agree with that whatsoever.	7	analysis that Herman, et al., did. It's
8	BY MR. TISI:	8	easier to declare that a result is not
9	Q. Okay. So let me go back to	9	statistically significant, falsely
10	Dr. Rothman's statement in in the	10	implying that there is no indication of
11	conclusion that he says in the	11	an association, rather than consider
12	conclusionary statement of his six	12	quantitatively the range of associations
13	misconceptions, persistent research	13	that the data actually support."
14	misconceptions.	14	Do you see that?
15	He says, "It's easy to	15	A. I that those are what
16	declare a result is not statistically	16	those are the words.
17	significant, falsely implying that there	17	Q. Okay. And the range of
18	is no indication of an association"	18	associations for the data is represented
19	A. I I'm sorry. I'm just	19	by the confidence intervals, correct?
20	stopping you because I really don't know	20	A. Now, where are you reading
21	where you're reading from.	21	that?
22	Q. It's the last of the	22	Q. I'm asking you that
23	conclusion sentence.	23	question. The range of associations in
24	A. Conclusion section on what	24	any reported study is the numbers that

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	Page 458		Page 460
1	are between the confidence intervals?	1	week. I have not read that.
2	MS. MILLER: Objection.	2	So did you give me that
3	THE WITNESS: That's not	3	statement so I can
4	necessarily true. In the	4	Q. I haven't yet. I'm going to
5	meta-analyses, we have the range	5	do it. But it's not just this week. Did
6	of associations of the point	6	you know in 2016 the American Statistical
7	estimates. Those are not	7	Association was so concerned about the
8	confidence intervals.	8	misuse of statistical significance in
9	MADAM COURT REPORTER:	9	P-values that it took the extraordinary
10	Chris, can we go off the record	10	step, never before taken before, and
11	for a second, just briefly?	11	never before taken since, to issue a
12	THE VIDEOGRAPHER: The time	12	statement about the misuse of P-values
13	is 4:07 p.m. Off the record.	13	and statistical significance?
14	(Brief pause.)	14	A. If you say that's true, I
15	THE VIDEOGRAPHER: We are	15	would have to see what that statement was
16	back on the record. The time is	16	at that time.
17	4:12 p.m.	17	Q. Had you ever had you ever
18	BY MR. TISI:	18	heard of that?
19	Q. Doctor, isn't it true, that	19	A. I
20	the statistical the statistics	20	MS. MILLER: Objection.
21	community has abandoned the looking only	21	THE WITNESS: I heard
22	at looking at statistical significance	22	that I may have heard there was
23	in favor of looking at where the	23	a P-value statement. But again, I
24	confidence intervals are on studies in	24	didn't read it.
	Page 459		
			Page 4611
1		1	Page 461
1 2	terms of making decisions about things	1 2	BY MR. TISI:
2	terms of making decisions about things like causation?	2	BY MR. TISI: Q. You didn't know that?
2 3	terms of making decisions about things like causation? MR. LOCKE: Objection.	2 3	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the
2 3 4	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two	2 3 4	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you
2 3 4 5	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The	2 3 4 5	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical
2 3 4 5 6	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that	2 3 4 5 6	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what
2 3 4 5 6 7	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that the statistical community	2 3 4 5 6 7	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what the position is on P-values and
2 3 4 5 6 7 8	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that the statistical community abandoned using P-values for	2 3 4 5 6 7 8	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what the position is on P-values and statistical significance?
2 3 4 5 6 7 8 9	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that the statistical community abandoned using P-values for statistical significance.	2 3 4 5 6 7 8 9	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what the position is on P-values and statistical significance? MR. LOCKE: Objection.
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2 3 4 5 6 7 8 9 10 11	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that the statistical community abandoned using P-values for statistical significance. And I I don't think I I'm not sure what you mean by the statistical community. But I know	2 3 4 5 6 7 8 9 10 11	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what the position is on P-values and statistical significance? MR. LOCKE: Objection. THE WITNESS: I said I haven't read the statement. BY MR. TISI:
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	terms of making decisions about things like causation? MR. LOCKE: Objection. THE WITNESS: So there's two different questions there. The first I heard, isn't it true that the statistical community abandoned using P-values for statistical significance. And I I don't think I I'm not sure what you mean by the statistical community. But I know in the medical literature and all studies that I've worked on and all studies that I published, we had P-values in them. So I don't know who you mean by the statistical community abandoning P-values. BY MR. TISI: Q. Well, what about the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. TISI: Q. You didn't know that? Somebody as accomplished as you in the scientific and statistical community, you don't know when the American Statistical Association position, as a member, what the position is on P-values and statistical significance? MR. LOCKE: Objection. THE WITNESS: I said I haven't read the statement. BY MR. TISI: Q. Did you not know that it even existed before I brought it up to you? A. Again, I didn't know what type of statement it is and the way you characterized it. As I said, I think I heard there was some things on P-values Q. Did you bother to look it

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	Page 462		Page 464
1	MS. MILLER: Objection.	1	because all the studies I looked
2	BY MR. TISI:	2	at were talking about statistical
3	Q. So having heard there was a	3	significance. So it would be odd
4	statement about statistical significance	4	if I didn't talk about statistical
5	and P-values by the American Statistical	5	significance.
6	Association, it wasn't important for you	6	Can you show me a report
7	to look it up and see, well, what do my	7	where there wasn't a P-value in
8	colleagues say about this?	8	the studies I reviewed.
9	A. I don't think it's a matter	9	BY MR. TISI:
10	of importance. I think it's a matter of	10	Q. I'm asking you the
11	time. And you know, I when that came	11	questions. I'm asking you the questions.
12	out, I may have thought, oh, that's	12	And the question that I'm asking you is,
13	something worth looking at. But, you	13	since you were doing a whole causation
14	know, my time got consumed by more	14	analysis, looking at the totality of the
15	pressing matters, and I never got to it.	15	evidence, 30-some odd studies and dealing
16	Q. This came out in 2016. This	16	with an issue of consistency, and relying
17	is 2019. You mean you had no time in the	17	on statistical significance, not for one
18	past three years to look at a	18	study, but looking across studies,
19	two-three-page statement about the misuse	19	looking across design, did you not think
20	of P-values and statistical significance?	20	it important to say, you know, I remember
21	MS. MILLER: Objection.	21	that the American Association for
22	THE WITNESS: That's not	22	American Statistical Association came out
23	what I said or meant. What I	23	with this really unique statement. Maybe
24	meant is that at the time it came	24	I ought to pick it up and take a look at
	Page 463		Page 465
1	out, I likely thought, oh, if I	1	it?
2	ever have a spare minute, this	2	MR. LOCKE: Objection.
3	would be something interesting to	3	THE WITNESS: Again, I don't
4	look at. But I don't think I came	4	see how that's relevant, because
5	out with I the spare minute	5	to do the analyses I've done, I
6	probably may have happened later.	6	rely upon how the papers report
7	But by that point, I had forgotten	7	their results and so forth. And I
8	about it.	8	can't impose sort of a different
9	BY MR. TISI:	9	way for them to analyze their
10	Q. Well, in the interim you had	10	data.
11	written two reports, one in	11	BY MR. TISI:
12	Viagra/Cialis Cialis outside of your	12	Q. They didn't do they
13	work and one here for 56 hours or	13	didn't do Bradford Hill tests, did they?
14	whatever it happened to be.	14	You did. You did in this litigation.
15	And you mentioned	15	All the studies, very none of these
16	statistical significance a lot in your	16	studies did a Bradford Hill Bradford
17	report.	17	Hill analysis, but you did, true?
18	Could you have taken one of	18	MS. MILLER: Objection.
19	those hours to look up what the American	19	THE WITNESS: I don't know
20	Statistical Association says about	20	how P-values are relevant just to
21	statistical significance?	21	Bradford Hill. I don't get that.
22	MS. MILLER: Objection.	22	BY MR. TISI:
23	THE WITNESS: I'm not sure	23	Q. You applied your own
	how that would be relevant,	24	independent independent expertise as a

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	Page 466		Page 468
1	statistician at a medical university and	1	Q. Is that a criticism
2	you are unaware what the American	2	MS. MILLER: And also talk
3	Statistical Association says about	3	over me.
4	P-values?	4	MR. TISI: I'm going to talk
5	MS. MILLER: Objection.	5	because
6	THE WITNESS: Again, I	6	MS. MILLER: Do you just
7	looked at all the literature that	7	talk over all women?
8	exists. And I I used the	8	MR. TISI: Oh, please don't
9	Bradford Hill criteria to	9	do that to me. I have no problem
10	determine whether or not there is	10	with you with you objecting.
11	a causal relationship between	11	But your constant speaking
12	perineal talc exposure and ovarian	12	objections are are really
13	cancer.	13	overboard.
14	And the methodology that I	14	BY MR. TISI:
15	used is the methodology that all	15	Q. Doctor
16	others use. And so I don't see	16	MS. SHARKO: I don't think
17	the relevance of having to look	17	the record will demonstrate that.
18	up or I don't see the relevance	18	MR. TISI: I think the
19	of looking up a statement on	19	record will demonstrate that.
20	P-values to do that analyses.	20	BY MR. TISI:
21	BY MR. TISI:	21	Q. Doctor, did you isn't one
22	Q. You know that looking at the	22	of your criticisms of the plaintiffs'
23	plaintiffs' experts reports they you	23	experts, one of them, is that they
24	clearly were critical of the plaintiffs'	24	they were looking at the point estimate
	Page 467		Page 469
1	experts for looking at the point	1	and not the of these studies for
2	estimates and not considering the	2	consistency, and not considering whether
3	whether a study was statistically	3	or not they were statistically
4	significant or not, true?	4	significant or not? I'm asking you, is
5	A. Can you point me to	5	that as you sit here today, is that
6	Q. I'm asking whether that's	6	one of your criticisms?
7	true. We can go through it. I'm asking	7	A. I'm asking you to point that
8	you, was that or is that one of your	8	out to me, because you
9	criticisms?	9	Q. I'm asking you I'm asking
10	A. Well, you told me that was a	10	you, is that one of your criticisms?
11	criticism.	11	A. I I'll have to read
12	Q. Is it a criticism?	12	through all my criticisms. I'm happy to
13	A. I'm asking you show me in my	13	do so.
14	report where that	14	Q. I thought you would have
15	Q. Is that a criticism?	15	done that in preparation for today.
16	A. I can't	16	A. Yeah, and I'm tired. And
17	MS. MILLER: Please don't	17	it's a long day, and I don't I did not
18	talk over the witness.	18	memorize my, you know, 40-some-page
19	BY MR. TISI:	19	report. So I will
20	Q. Is that is that a	20	Q. When's the last time you
21	criticism of yours	21	A. I will take the time and go
22	MS. MILLER: How many times	22	through and
23	do I have to say it?	23	Q. When was the last time that
24	BY MR. TISI:	24	you read it before today?

118 (Pages 466 to 469)

	Page 470		Page 472
1	MS. MILLER: She's in the	1	MS. MILLER: Would you like
2	middle of a sentence again.	2	me to re-read?
3	BY MR. TISI:	3	MR. TISI: No. She's not
4	Q. When's the last time you	4	asking to re-read. You are.
5	read it before today?	5	THE WITNESS: Well, I am. I
6	MR. TISI: This is a	6	am. I'm confused. What is the
7	filibuster, and you know it.	7	question?
8	THE WITNESS: I'm trying to	8	BY MR. TISI:
9	answer your question. And you're	9	Q. Doctor doctor okay.
10	asking me if I made that	10	Do you have an opinion to a reasonable
11	criticism. And I'm saying that I	11	degree of scientific certainty that the
12	can't remember off the top of my	12	plaintiffs' experts were wrong and used
13	head.	13	an improper methodology if they looked at
14	BY MR. TISI:	14	the point estimates for consistency and
15	Q. Okay.	15	did not consider statistical
16	A. And if you know where it is	16	significance? If that was shown to be
17	in here, that I made that criticism, I	17	true, would that be wrong?
18	ask for the help. You said no, I'm not	18	A. I think if someone only
19	going to do that. You need to remember	19	looked at point estimates and did not
20	that. And	20	look at statistical significance, that
21	Q. I didn't say that.	21	would be incorrect.
22	A. Well, that's how I	22	Q. Okay. What if they looked
23	interpreted it.	23	at the point estimate and the confidence
24	Q. Okay.	24	interval, irrespective of statistical
	Page 471		Page 473
1	A. And then I said, well, okay,	1	significance?
2	then I'll have to go through and read to	2	A. Again, I'd have to see the
3	see if I made that criticism.	3	analyses. The analyses that I looked at
4	Q. Okay. As you sit here	4	in terms of consistency was
5	today, okay, because honestly, I don't	5	methodologically flawed.
6	have the time to go through this. But I	6	Q. Okay. Let's look at the ASA
7	know it's in there.	7	statement on P-values. If you go to the
8	A. Well, then please show it to	8	"ASA statement on P-values: Context and
9	me.	9	purpose, the editorial."
10	Q. I said I know it's in there,	10	Do you see that? Second
11	and I don't have the time to go through	11	page.
12	it. But I'm asking you, as you sit here	12	A. I don't have that document.
13	today, do you have an opinion to a	13	Q. It's right in front of you,
14	reasonable degree of scientific certainty	14	I believe.
15	that the plaintiffs' experts were wrong	15	A. 28?
16	and used an improper methodology if they	16	Q. Mm-hmm.
17	looked at the point estimates and did not	17	A. Second page?
18	consider statistical significance? If	18	Q. Yep. It says, "ASA
19	that were shown to be true, would that be	19	statement on P-values: Context, process,
20	wrong?	20	and purpose."
21	MS. MILLER: Objection. If	21	A. Okay.
22	what was shown to be true?	22	Q. And if you go down and
23	MR. TISI: Read the	23	I'm just going to ask you one question
24	question, Counsel.	24	here, so I don't think it's necessary for
	question, counsel.	4 4	nere, so i don t dinik it s necessal y loi

119 (Pages 470 to 473)

	Page 474		Page 476
		_	
1	you to read the whole thing.	1	please?
2	It says, "When the ASA board	2	Q. Page 131. We are at the
3	decided to take up" at the very last	3	bottom, 63.4.
4	paragraph at the bottom of the left	4	A. Okay. Yes, I'm there.
5	column. "When the ASA board decided to	5	Q. Do you see Number 2 where it
6	take up the challenge of developing	6	says, "P-values" and let me ask you if
7	policy statements on P-values and	7	this is a true statement or not.
8	statistical significance, it did so	8	"P-values do not measure the probability
9	recognizing this was not a lightly taken	9	that a study hypothesis is true or the
10	step. The ASA has not previously taken	10	probability that the data was produced by
11	positions on specific matters of	11	random chance alone."
12	statistical practice."	12	Do you see that?
13	Is that true? I mean, is	13	A. Yes, I do.
14	that did I read that correctly?	14	Q. Okay. It says, "Researchers
15	A. You read the words, yes.	15	often wish to turn P-values into a
16	Q. Okay. Have you ever seen	16	statement the truth of a null hypothesis
17	the ASA do issue a statement other	17	or about the probability that random
18	than what I've just presented you here,	18	chance produced the overall data. The
19	about statistical practice?	19	P-value is neither. It is a statement
20	A. Well, they state that they	20	about the data in relation to a specified
21	previously have not previously taken	21	hypothetical explanation and it is not a
22	positions. So if what they are saying is	22	statement about the explanation itself."
23	true, there would be nothing to see.	23	Is that true?
24	Q. Okay. And if you look at	24	A. Yeah, I I'll have to
	Page 475		Page 477
1	the next page, some of the people who	1	parse it in different ways.
2	were involved in this are, among other	2	So it is true that the
3	people, Sander Greenland, and Kenneth	3	P-value is not the truth about a
4	Rothman. You see their names there?	4	hypothesis. To calculate a P-value, you
5	A. I'm sorry. Where are you?	5	need to assume the hypothesis is true.
6	Q. Next page. Do you see the	6	Therefore, it can't be the
7	bullet points on the right?	7	probability that the hypothesis is true
8	A. Yeah. There's a list of	8	because you assumed it was true. So,
9	individuals. Yes, I see that.	9	yes, I agree with that.
10	Q. Among them Sander Greenland,	10	Q. But it also says
11	Kenneth Rothman, the two people that	11	THE VIDEOGRAPHER: Chris,
12	we've been talking about all day,	12	watch your watch your
13	correct?	13	microphone. Sorry.
14	A. So, again, can you point	14	BY MR. TISI:
15	me you mean these bullets?	15	Q. But it also says it is not a
16	Q. Yeah.	16	statement of the truth of the null
17	A. Well, these are references.	17	hypothesis.
18	Q. Okay. All right. If you go	18	A. That's what I mean. You're
19	to the next page, the ASA statements on	19	assume the null hypothesis is true in
20	statistical significance.	20	order to calculate a P-value. So
21	A. On what page? Could you	21	therefore the P-value cannot be the
22	just	22	probability the null hypothesis is true
23	Q. Next page.	23	because that was the assumption to get
24	A say the page number,	24	the P-value.
Z T			

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	Page 478		Page 480
1		1	
1 2	Q. The next statement is "Scientific conclusions and business	1 2	sentence says
3	policy decisions should not be based only	3	A. No, no, no. Very end of what?
4	on whether a P-value passes a specific	4	
5	threshold. Practices that reduce data	5	Q. The very end of the conclusion section.
6	analysis to scientific inferences to	6	A. On a different page now?
7	mechanical bright-line rules, i.e.,	7	Q. On a different next page.
8	P-value .05 for justifying scientific	8	The next sentence says, "No single index
9	claims and conclusions, can lead to	9	should substitute for scientific
10	enormous beliefs and poor decisionmaking.	10	reasoning."
11	"A conclusion does not	11	Do you agree with that?
12	immediately become true on one side of	12	A. I haven't again, that's
13	the divide and false on the other."	13	taken out of context. I agree with the
14	Do you agree with that?	14	whole thing that's, "Good statistical
15	• •	15	practice is an essential component of
16	A. I agree that you read the sentence. And I go on, and what makes	16	good scientific practice, emphasizes
17	me this true is researchers should	17	principles of good study design and
18	bring many contextual factors into play	18	conduct, a variety of numerical and
19	to derive scientific inferences,	19	graphical summaries of data,
20	including the design of a study, the	20	understanding the phenomenon under study,
21	quality of the measurements, the external	21	and interpretation of results in context,
22	elements for the phenomenon under study,	22	complete reporting and proper and logical
23	and the validity of the assumptions that	23	quantitative understanding of what the
24	underlie the data analysis. And to me,	24	data summaries mean."
	Page 479		Page 481
1		1	
1	this sort of encompasses what the	2	Q. And then the next sentence
2 3	Bradford Hill framework is doing. Q. And let's read the rest of	3	says?
4		4	A. "No single index" I don't
5	it. It goes on to say, "Pragmatic considerations often require binary yes	5	know what they're referring to there. It
6	and no decisions, but does not mean that	6	doesn't say the P-value alone "should substitute for scientific reasoning." It
7	the P-value alone can ensure that a	7	says no single index. It could be any
8	decision is correct or incorrect. The	8	
9	widespread use of statistical	9	index, the mean. Q. Now, do you know that the
10	significance, generally interpreted as a	10	American Statistical and you were not
11	P-value less than or equal to .05, is a	11	asked to be on this panel, I assume,
12	license for making a claim of a	12	since you didn't even know that you
13	scientific finding or implied truth,	13	hadn't even read it. So you were not on
14	leads to considerable distortion of the	14	this panel. You were not asked by your
15	scientific process."	15	colleagues to participate in this,
16	Is that true or not?	16	correct?
17	A. That is true in the context	17	MS. MILLER: Objection.
18	of what they mean in that you cannot use	18	Please let me object.
19	a single study to say this study was	19	THE WITNESS: Could you show
20	statistically significant, therefore, I	20	me who was on the panel?
21	have proven something scientifically, a	21	BY MR. TISI:
22	single study.	22	Q. I'm just asking you, were
23	Q. Okay. At the very end of	23	you asked to be on this panel?
24	it, on conclusion, it says at the last	24	A. I I yeah, I don't know
	in our rollerabloin, it buyb at the last		12. I I jour, I don't know

121 (Pages 478 to 481)

Page 482 1 how who is on the panel and how many 2 people are on the panel. 3 Q. I didn't ask you that. 4 A. But I have a feeling that Page 482 1 important statistics journal that the 2 is. I think it depends upon no. 3 Q. Did you know just this value as I indicated, that the journal deviation of the panel and how many 2 is. I think it depends upon no. 3 as I indicated, that the journal deviation of the panel and how many 2 is. I think it depends upon no. 4 as I indicated, that the journal deviation of the panel and how many 2 is. I think it depends upon no. 4 as I indicated, that the journal deviation of the panel and how many 2 is. I think it depends upon no. 4 as I indicated, that the journal deviation of the panel and how many 2 is. I think it depends upon no.	Page 484
2 people are on the panel. 2 is. I think it depends upon no. 3 Q. I didn't ask you that. 2 O. Did you know just this v	ere
3 Q. I didn't ask you that. 3 Q. Did you know just this v	
5 there are many people that weren't on the 5 its entire volume to the issue of	olea
6 panel. 6 statistical significance?	
7 Q. I didn't ask that. I asked 7 A. So this week's journal?	
8 whether you were asked to be on the 8 Q. Mm-hmm.	
9 panel. 9 A. And, you know, I don't e	even
10 A. No, I was not asked to be on 10 know if I had been in my office to	
11 the panel. 11 it. So I am not aware of that.	gei
12 Q. That was the answer to the 12 Q. You weren't aware that it	it
13 question. Thank you. 13 was coming out, were you?	ıı
14 Next question is now, I 14 A. I don't know why I woul	d bo
15 represented to you that this week the 15 aware that it's coming out.	d bc
16 American you know, do you get the 16 Q. Sometimes if something	hia
17 journal, the American Statistician? 17 is happening in the world of statis	
18 A. Yes. 18 kind of a lot of people involved, i	
	•
r · · · · · · · · · · · · · · · · · · ·	C.
100	••
· · · · · · · · · · · · · · · · · · ·	W
Page 483	Page 485
1 Q. It's a high-impact journal 1 mean, I know in JCO, we put out	very
2 within that field? 2 we put out special issues. And I d	don't
3 MS. MILLER: Objection. 3 think all of oncology is aware it's	
4 THE WITNESS: Wait, what's 4 coming out.	
5 the journal again? 5 Q. So I'm going to show yo	
6 (Document marked for 6 the is the journal Science a goo	
7 identification as Exhibit 7 journal? Sorry. Nature. I'm sorr	
8 Ballman-28.) 8 A. Yes. Nature is a very go	ood
9 BY MR. TISI: 9 journal.	
10 Q. The American the 10 Q. The entire ASA journal	was
11 American what's the journal of the 11 devoted to 43 studies, 43 papers of	on this
12 American Statistical Society? 12 topic.	
13 A. What is the journal? The 13 MS. MILLER: What's A	SA?
14 journal JASA. 14 MR. TISI: The American	n
15 Q. Yeah. Actually, just give 15 Statistical Association.	
16 me the I'm sorry. I apologize. 16 MS. MILLER: That's no	t a
17 A. JASA, I believe, is the 17 journal. That's an association	1.
18 Journal of ASA. The Journal of the 18 You said	
19 American Statistical 19 MR. TISI: You're	
20 Q. It's the American 20 interrupting me now.	
21 Statistician. The American Statistician. 21 MS. MILLER: Fine.	
22 A. Yeah, that's sort of a I 22 MR. TISI: Their journal	is
23 get that journal. I don't know if people 23 the American Statistician.	
24 would characterize it as the most 24 MS. MILLER: I think sh	ie

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	Page 486		Page 488
1	said that's not their journal.	1	MS. MILLER: Objection.
2	THE WITNESS: No, I didn't	2	That was not read correctly.
3	say that.	3	BY MR. TISI:
4	MS. MILLER: Oh, I	4	Q. These three authors and more
5	misunderstood.	5	than 800 signatories call for an end to
6	THE WITNESS: I said I don't	6	hyped claims and the dismissal of
7	believe it's the most important.	7	possibly crucial effects.
8	Could I don't know if	8	<u> </u>
9	there's 40-some articles.	9	Do you see that? A. I see how that's stated
	BY MR. TISI:	10	
10			there.
11	Q. I'm going to represent to	11	Q. Okay. And I'm happy to give
12	you that it is.	12	you an opportunity to read it. And since
13	And I'm you know, you can	13	you haven't read it, and this will take a
14	either believe me or not. My guess is at	14	moment, I'm happy to do it, but I am
15	some point this week, you may go home and	15	going to focus your attention to certain
16	take a look at it. But I didn't bring	16	things.
17	all 43 articles. And you'd want to read	17	Do you want to glance
18	them all anyway. So we don't have the	18	through it, I'm more than happy to have
19	time to do that.	19	you glance through it, but we can do it
20	A. But I'd at least like to	20	off the record.
21	look at the titles.	21	MR. TISI: Go off the
22	MR. TISI: Okay. Well, John	22	record, please.
23	can you pull up the titles of the	23	MR. LOCKE: No, no.
24	43? If you can get them on your	24	MR. TISI: That's what we've
	Page 487		Page 489
1	computer, please.	1	done if it's a long
2	BY MR. TISI:	2	MR. LOCKE: No, we have not.
3	Q. But in the meantime, a	3	MR. TISI: Yes, we have.
4	commentary related to this, this	4	MR. LOCKE: No, we have
5	publication was published in Nature by	5	not
6	Drs. Greenland, Blake McShane and	6	MR. TISI: Yes, we have.
7	Valentin Amrhein.	7	Yes, we have.
8	(Document marked for	8	MS. MILLER: I thought we go
9	identification as Exhibit	9	off the record if it's something
10	Ballman-29.)	10	the witness
11	BY MR. TISI:	11	MR. TISI: Hadn't seen,
12	Q. Okay. Let me show you that.	12	yeah.
13	Now, the title of this is "Retire	13	MS. MILLER: No, if it was
14	Statistical Significance."	14	something the witness had cited
15	Do you see that, Doctor?	15	and a reference. But if it's
16	A. It says "Retire Statistical	16	something the witness had never
17	Significance."	17	seen before, I don't think we'd go
18	Q. Okay. And actually,	18	off
19	underneath it says, Valentin Amrhein,	19	MR. TISI: No, that's what
20	Sander Greenland, and Blake McShane, and	20	we that's what we've been
21	more 800 signatories, call for an end to	21	doing.
22	hyped up claims and dismissal	22	MR. LOCKE: That's not what
23	dismissal of possibly crucial effects.	23	we've been doing.
			MR. TISI: That's exactly

123 (Pages 486 to 489)

	Page 490		Page 492
1	what we've been doing.	1	that I actually know is Sander
2	Anyway, she's looking at it.	2	Greenland. I do not know who
	BY MR. TISI:	3	Blake McShane is, nor Valentin
4	Q. Let's go through. I'm going	4	Amrhein.
5	to ask you to read down to the bottom of	5	BY MR. TISI:
	the left-hand column. I'll ask you some	6	Q. Do you know do you have
	questions about that.	7	respect for Sander Greenland?
8	A. How far do you want me to	8	MS. MILLER: Objection.
	read?	9	THE WITNESS: Again, I know
10	Q. Just to the bottom of the	10	his name. I know he's done you
11	left-hand column?	11	know, he's authored some books and
12	A. Second page?	12	so forth.
13	Q. Second page, correct.	13	BY MR. TISI:
14	A. Okay. Just the bottom of	14	Q. So what they say here and
15	that first column.	15	of course, I'm reading in the second
16	Q. Correct.	16	page. It says, "We agree" "We are far
17	A. I have read that.	17	from alone. We invited others to read
18	Q. Actually, and you can	18	this draft" "read a draft of this
19	continue to the next the first	19	comment and sign their names if they
20	paragraph on the next page.	20	concurred with our message. 250 did so
21	MS. MILLER: The first	21	within 24 hours. A week later, we had
22	paragraph on the next column or	22	more than 800 signatories, all checked
23	the	23	for academic affiliation or other
24	MR. TISI: Next column.	24	indication of present or past work in a
	Page 491		Page 493
1	BY MR. TISI:	1	field that depends on statistical
2	Q. Actually, you can read the	2	modeling."
3	whole read the whole column up until	3	Do you see that?
	the next category.	4	A. That's what it says there.
5	A. Yes. I read it.	5	Q. Okay. So this has been
6	Q. So, Doctor, under the	6	endorsed by 800 of your colleagues?
7	section that says first of all, these	7	MR. LOCKE: Objection.
	are all these authors are all people	8	BY MR. TISI:
	that you know in your field, correct?	9	Q. Correct?
10	A. I've heard of their names.	10	A. I don't know who the 800
11	Q. Okay. These are all widely	11	people are.
12	respected statisticians and	12	Q. Okay. And they say, "The
	epidemiologists, correct?	13	pervasive problem" here on Page 1,
14	MS. MILLER: Objection.	14	says, "Let's be clear about what must
15	MR. LOCKE: Objection.	15	stop. We should never conclude that
16	THE WITNESS: Ĭ I I	16	there is no difference or no association
17	can't speak to what respect they	17	just because a P-value is larger than a
18	do or they do not have. I know	18	threshold of .05, or equivalently because
19	their names.	19	a confidence interval includes zero.
20	BY MR. TISI:	20	"Neither should we conclude
21	Q. And do you have respect for	21	that two studies conflict because one had
22	them?	22	a statistically significant result and
23	MS. MILLER: Objection.	23	the other did not. These errors waste
24	THE WITNESS: The only name	24	much research efforts and misinform

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1policy decisions."12Do you see that?23A. That's what they say.34Q. Do you agree?45A. I I I don't know if I56agree or not. I mean, I have to read6	Q. Okay. But their statement is definitive. They're not hedging at all? They're saying don't do this. MS. MILLER: Objection.
Do you see that? A. That's what they say. Q. Do you agree? A. I I I don't know if I agree or not. I mean, I have to read	is definitive. They're not hedging at all? They're saying don't do this.
3 A. That's what they say. 3 4 Q. Do you agree? 4 5 A. I I I don't know if I 5 6 agree or not. I mean, I have to read 6	all? They're saying don't do this.
4 Q. Do you agree? 4 5 A. I I I don't know if I 5 6 agree or not. I mean, I have to read 6	
5 A. I I I don't know if I 5 6 agree or not. I mean, I have to read 6	
6 agree or not. I mean, I have to read 6	THE WITNESS: They are
,	hypothesizing.
7 this more through more carefully. There 7	BY MR. TISI:
8 are some aspects that I agree. I agree 8	Q. They are not hypothesizing.
9 that, you know, it's wrong to conclude 9	They're saying let's be clear about what
10 that two studies conflict because one has 10	must stop.
11 statistically significant results or not. 11	A. That, they're clear about.
So I agree with the example 12	But again, if I could you asked me if
13 that they give, null or one has a risk 13	I agree with this statement. And you cut
14 ratio of 1.2, that it is statistically 14	me off when I said that they are
15 that has that is statistically 15	hypothesizing. So may I finish that?
16 significant, or just is not statistically 16	Q. Sure.
17 significant by the .05 level if P-value 17	A. So they are hypothesizing by
18 of .091.	saying eradicating and I'm surprised
19 Another one also has a risk 19	statisticians are doing this.
20 ratio of 1.2, so similar risk ratios. 20	"Eradicating categorization will help to
21 And its P-value is statistically 21	halt overconfident claims, unwarranted
22 significant. So I agree that I would not 22	declarations of no difference, and absurd
23 conclude that those two studies conflict. 23	statements about replication failure.
Q. And they result and they	I don't see any evidence.
Page 495	Page 497
1 talk about the American Statistical 1	This is a hypothesis, that doing this is
2 Association in the statement that we just 2	going to stop this. I don't see any
3 read from 2016, right? The associated 3	evidence here, unless it's in here, which
4 statement in the American Statistician, 4	I haven't been able to read in detail,
5 warning against the misuse of statistical 5	that there's evidence doing so is going
6 significance. And that was what we just 6	to prevent these things.
7 talked about as Exhibit Number 7	Q. Let's go to the next page.
8 A. 28.	And there's a paragraph that I want you
9 Q 28, correct? 9	to read. I'm going to ask you to read it
10 A. They cite that statement, 10	in entirety because it deals with an
11 yes. 11	issue that we talked about before.
Q. And it says, "Eradicating 12	Go to the next page. It
13 categorization will help halt" 13	says under the term second on the
14 A. Now where do you where 14	left-hand side. And it says and I'll
15 are you now?	read it into the record.
16 Q. In the middle. In the blue.	"Second, not all values
17 A. Okay. 17	inside" they're talking about inside
18 Q. "Eradicating categorization, 18	the confidence interval are equally
19 will help halt overconfident claims, 19	compatible with the data, given the
20 warranted claims of no different and 20	assumptions.
21 absurd statements about replication 21	"The point estimate is the
22 failure." 22	most compatible, and the values near it
Do you agree with that?	or more compatible than those at the
24 A. Again, I think it depends. 24	outer" "near the limits. That is why

125 (Pages 494 to 497)

Page 498		Page 500
1 we urge authors to discuss the point	1	the number?
2 estimate, even when we have large	2	THE WITNESS: And after
3 P-values or a wide interval, as well as	3	that, and I'm willing to do this.
4 discussing the limits of that interval.	4	But I do need a bathroom break.
5 "For example, authors above	5	That water I drank.
6 could have written, "Like a previous	6	Yes, I have it.
7 study our results suggest a 20 percent	7	MR. SOILEAU: It's 26.
8 increased risk on new onset atrial	8	MS. MILLER: I got it.
9 fibrillation in patients given	9	THE WITNESS: We have it.
10 antiinflammatory drugs. Nonetheless, the	10	BY MR. TISI:
11 risk difference ranging from a 3 percent	11	Q. First, we talked about
12 decrease, a small negative association,	12	the comment that we talked about before
13 to a 48 percent increase, a substantial	13	if you look at the the most likely, do
14 positive association, is also reasonably	14	you agree with the statement in this,
15 compatible with our data.	15	"The point estimate is the most
16 "Interpreting the point	16	compatible with" "and the values near
17 estimate while acknowledging its	17	it are more compatible than those near
18 uncertainty will keep you from making	18	the limits in terms of the true risk."
19 false declarations of no difference and	19	A. Yeah, so can I place
20 then making overconfident claims."	20	something it says compatible with the
Do you see that?	21	data. It doesn't say compatible with the
22 A. I that's what it says	22	truth. We don't know the truth.
23 there.	23	So compatible with the data,
Q. Okay. Now, let's go back to	24	I agree. Compatible with the truth, I do
Page 499		Page 501
1 talk about talc. First of all, do you	1	not agree because we don't know the
2 agree with that?	2	truth. And we're just trying to estimate
3 A. Again, I I would need to	3	it with the data. But it could be
4 read. I don't know what study they are	4	drastically wrong, like if there are
5 talking about above. I mean, I think	5	recall biases and selection biases.
6 I	6	Q. But one of the things that
Q. Well, they're talking about	7	statisticians do is they say, look at the
8 the one we read on the prior page, the	8	whole confidence interval, right? They
9 example that we read on the prior page	9	say, here, the real thing that you really
with the example that we talked about	10	need to do is look at the range
that was talked about, that I asked you	11	represented by the confidence interval.
12 to read before.	12	A. I think yeah, they're
13 A. So I'm not comfortable	13	just saying one should look at the
14 agreeing or disagreeing with something	14	uncertainty in the estimate by looking at
that I was just handed and told, okay,	15	the confidence interval.
16 you have a few minutes to read through	16	Q. Okay. And the example they
this, you know, quickly and not have time	17	give is, if the confidence interval goes
18 to think about it. So I'm just not	18	from a negative, and like a .97 all the
19 comfortable saying whether I agree or	19	way up to a 1.48, that you should talk
20 not.	20	about the fact that, yes, it crosses
Q. Well, let's go to	21	zero. And you might have some risk that
22 Dr. Merlo's chart if we could, back to	22	is negative. But most of the risk lies
23 that.	23	in the positive area.
	24	A. Yeah, I don't know where you

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	Page 502		Page 504
1	are getting that confidence interval. I	1	to the exhibit with Dr. Merlo's exhibit
2	don't see a .97.	2	there. Would you please take for me, if
3	Q. It says here, "Nonetheless,	3	you could I'm going to give you this
4	the risk difference ranging from a 3	4	pen. And would you please highlight for
5	percent decrease"	5	me every single risk ratio that's above
6	A. Oh, I see.	6	one?
7	Q "a small negative	7	MS. MILLER: Objection.
8	association"	8	THE WITNESS: The risk ratio
9	A. Okay.	9	itself?
10	Q "to a 48 percent" "a	10	BY MR. TISI:
11	substantial"	11	Q. Yes.
12	A. I see. So you took one	12	A. I'm sorry. I goofed.
13	minus 3 percent. I got it. I'm with	13	MS. MILLER: Can you give a
14	you.	14	new one? She made a mistake.
15	Q. Okay. Okay. And so what	15	THE WITNESS: Can I color it
16	they're saying is you look at the	16	in green or something so
17	entirety of the confidence interval and	17	BY MR. TISI:
18	use your judgment. And you don't rely on	18	Q. Yeah, color it well, why
19	a snap decision of saying statistically	19	don't we put an X by it. This way we'll
20	significant or not, true?	20	know. Which one did you do it wrong?
21	A. Say ask the question	21	A. The last one.
22	again.	22	Q. Okay. That's Gonzalez. For
23	Q. They're saying you don't	23	the record, Gonzalez is not greater than
24	just flip a switch on statistical	24	one, correct?
	Page 503		Page 505
1	significance. They say you look at the	1	MS. MILLER: Objection.
2	entirety of the confidence interval in	2	THE WITNESS: Yes, that's
3	the context of everything, correct?	3	correct.
4	A. Yeah. They're saying one	4	BY MR. TISI:
5	one can report the confidence interval so	5	Q. So now
6	that you know the uncertainty that's	6	A. The risk ratio.
7	associated with the point estimate.	7	Q. Now, the next thing that
8	MS. MILLER: Okay. I think	8	Dr. Greenland and his colleagues point
9	she asked for a break.	9	out here is that we look at the
10	MR. TISI: Sure. Although	10	confidence interval, correct?
11	we're in the yeah, if you need	11	A. What do you mean by the next
12	to do a break, we'll do that.	12	thing?
13	THE WITNESS: It can only be	13	Q. Well, one of the things he
14	like two minutes.	14	says, you need to look not at statistical
15	THE VIDEOGRAPHER: All	15	significance so much as the confidence
16	right. Stand by, please. Remove	16	interval, correct?
17	your microphones. The time is	17	A. Where is that statement?
18	4:48 p.m. Off the record.	18	Q. Well, he says here, he says,
19	(Short break.)	19	"The point estimate is the most
20	THE VIDEOGRAPHER: We are	20	compatible value and the values near the
21	back on the record. The time is	21	most comparable" "comparable than
22	4:54 p.m.	22	those near the limits. That's why you
23	BY MR. TISI:	23	urge authors to discuss the point
24	Q. Doctor, if you can go back	24	estimate even when you have a large

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	Page 506		Page 508
1	P-value or wide interval."	1	numbers on the page, for most of
2	Okay. And then he talks	1 2 3	these, are greater than one.
3	below about where the confidence interval	3	BY MR. TISI:
4	rates go, correct?	4	Q. Okay. Would you also agree
5	A. Well, you didn't quite	5	that irrespective of design, every one of
6	complete that sentence. So when they	6	these every one of these studies that
7	have a large P-value or wide interval as	7	you highlighted in yellow, the vast
8	well as discussing the limits of the	8	majority of excuse me, highlighted in
9	interval.	9	red
10	Q. Okay. So let's discuss the	10	A. Pink.
11	limits of the interval for a moment.	11	Q pink are consistent with
12	A. Okay.	12	a 20 percent increased risk of ovarian
13	Q. Okay. I'm going to ask you,	13	cancer?
14	if you wouldn't mind, to circle every	14	MS. MILLER: Objection.
15	P-value on every confidence interval	15	THE WITNESS: That I
16	that includes 1.2 actually, let me use	16	disagree with.
17	a black pen, use that that includes	17	BY MR. TISI:
18	1.2 either as within the upper or	18	Q. Okay. Why would you say
19	lower bounds.	19	that?
20	A. Every confidence interval?	20	A. Because we know that
21	Q. Yeah, where 1.2 is within	21	population-based case-control studies
22	the confidence interval. I'll ask you to	22	or, sorry, case-control studies and
23	do one other thing. This is the last	23	well, and to some degree the cohort
24	thing I'll asked you to do with art.	24	studies have confounding and bias in
	Page 507		Page 509
1	Take this blue pen, and	1	these.
2	would ask you to put a mark by the side	2	And so, therefore, it's hard
3	of anything that in any of those studies	3	to know what the true risk ratio is,
4	that include within the confidence	4	because if you're consistently
5	interval of 1.25?	5	overestimating something, just because
6	MS. MILLER: Objection.	6	every study that has the same design that
7	BY MR. TISI:	7	consistently overestimates something,
8	Q. Or maybe you can highlight	8	doesn't make the truth. That's something
9	the inside of the however you want to	9	that is estimated.
10	do it. It's up to you.	10	Q. Let me put it this way.
11	A. (Witness complies.)	11	Would you agree with me with respect to
12	Q. Doctor, when you were	12	the cohort studies and the case-control
13	looking at this, you had an opportunity	13	studies, that the vast majority of them
14	to take a look at this, and you've done a	14	have in common a 20 percent have
15	little bit of art here on this.	15	20 percent in their confidence interval?
16	Irrespective of the	16	MS. MILLER: Objection.
17	statistically statistical	17	THE WITNESS: I don't know
18	significance, would you agree that,	18	why that would be relevant,
19	irrespective of design, every one of	19	because as what you were just
20	these studies that the vast majority	20	having me read before, it says
21	of them, have a point estimate greater	21	look at the risk ratios and see
22	than one?	22	sort of if they're the same. Like
23	MS. MILLER: Objection. THE WITNESS: I mean, the	23 24	the example they gave, they had two risk ratios which were exactly
24		. //	INVO PICK POTICE WINION WORD AVOITIN

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the same. One was statistically significant, one was not. And as I pointed out in my report, the risk ratios across the case-control studies differ by as much as four times. And so — BY MR. TISI: A To be exactly the same? A To be exactly the same? A To comparing. MS. MILLER: Objection. THE WITNESS: Again, I would at have to see — it depends on what the sut dies are that I'm looking at and so forth. THE WITNESS: The exact they all have exact same risk ratio? MS. MILLER: Objection. THE WITNESS: The exact they all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step are risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact step all have exact exame risk ratio? MS. MILLER: Objection. THE WITNESS: The exact state of the vast majority of thems. A. I think it decision — the vast majority of these studies have had and outliers on the lowe dand and outliers on the high end. But the vast majority of them. A. But your — so your — your — your — D. Go ahead. A. So when I look at numbers, I can say that those numbers fall in that range. The vast majority of them. A. But your — so your — your — so your — your — your — D. Go ahead. A. So when I look at kex time and the struction in the vast majority of them. A. So when I look at ke		Page 510		Page 512
2 significant, one was not. 3 And as I pointed out in my 4 report, the risk ratios across the 5 case-control studies differ by as 6 much as four times. And so - 7 BY MR. TISI: 8 Q. Do you really expect in any 9 set of studies in anything that you've 10 ever done, that the risk ratios be 11 exactly the same? 12 A. To be exactly the same? 13 Again, it depends upon the studies that 14 I'm comparing. 15 Q. In fact, wouldn't you be 16 suspicious of a set of studies of any 17 design which had exactly the same risk 18 ratio? 19 MS. MILLER: Objection. 20 THE WITNESS: Again, I would 21 have to see it depends on what 22 the studies are that I'm looking 23 at and so forth. 24 BY MR. TISI: 25 Q. Have you ever seen that 26 happen, a group of five studies where 37 the Jappen, a group of five studies where 38 that yeah. 39 BY MR. TISI: 40 Q. Where five studies done in 41 different populations, have the exact 41 same - I mean, to how many 42 decimal places? Tve seen studies 43 that yeah. 44 BY MR. TISI: 45 Q. Well, how big would it have 46 to see. 47 There is some outliers on the low end and outliers on the high end. But the vast 47 majority of them. 48 But your so your 49 your your 40 Q. Go ahead. 41 true risk ratio is in that range, I have 41 true risk ratio is in that range, I have 41 true risk ratio is in that range, I have 42 the studies are that I'm looking 43 at and so forth. 40 Extended that exist, especially in the 41 true risk ratio of 1.3? 42 Extended that exist, especially in the 42 case-control studies. 41 true risk ratio of 1.3? 42 the studies are that I'm looking 43 at and so forth. 44 the studies are that I'm looking 45 true risk ratio of 1.3? 46 Extended that exist, especially in the 47 case-control studies. 40 NS. MILLER: Objection. 51 THE WITNESS: The exact 52 to be? 53 A. I tan't assumate that because 54 I need to know many factors. 65 Q. Well, how big would it have 66 to know many things in order to 67 calculate that. 67 Q. If act well and the case that the case that the case that the	1			
And as I pointed out in my report, the risk ratios across the case-control studies differ by as much as four times. And so - BY MR. TISI: O, Do you really expect in any set of studies in anything that you've ever done, that the risk ratios be ever done, that the risk ratios D, O in fact, wouldn't you be ever done, that the risk ratios E, A. To be exactly the same? 11		•		<u> </u>
4 report, the risk ratios across the 5 case-control studies differ by as 6 much as four times. And so 7 BY MR. TISI: 6 Thee is some outliers on the low end and outliers on the high end. But the vast majority of them. A. But your so your you				
5 case-control studies differ by as much as four times. And so 7 BY MR. TISI: 8 Q. Do you really expect in any 9 set of studies in anything that you've 9 ocyacle done, that the risk ratios be 10 evactly the same? 11 exactly the same? 12 A. To be exactly the same? 13 Again, it depends upon the studies that 14 I'm comparing. 15 Q. In fact, wouldn't you be 16 suspicious of a set of studies of any 17 design which had exactly the same risk 18 ratio? 19 MS. MILLER: Objection. 20 THE WITNESS: Again, I would 21 have to see it depends on what 22 the studies are that I'm looking 23 at and so forth. 24 BY MR. TISI: 25 Page 511 26 Q. Have you ever seen that 25 happen, a group of five studies where 3 they all have exact same risk ratio? 4 MS. MILLER: Objection. 5 THE WITNESS: The exact 5 that yeah, 9 BY MR. TISI: 5 Q. Where five studies done in 10 different populations, have the exact 12 same risk ratio. 18 BY MR. TISI: 19 Q. Where five studies done in 10 different populations, have the exact 12 same risk ratio. 19 BY MR. TISI: 20 Q. Where five studies done in 11 different populations, have the exact 12 same risk ratio. 11 MS. MILLER: Objection. 12 G. Go ahead. A. So when I look at numbers, I 20 As to whether or not the true risk ratio is in that range, I have true risk ratio is in that range, I have true risk ratio sit that range, I have true risk ratio sit that trange, I have true risk ratio sit that a range, I have to case-control studies. 9 Q. Now, didn't Dr have you calculated a confounding how big a confounder would have to be in order to calculate a confounding how big a confounder would have to be in order to calculate that. 1 Q. Have you ever seen that 15 depends upon many factors. 2 Q. Well, how big would it have to be? 4 A. I can't answer that because I need to know many things in order to calculate that. 5 Q. I'r you go back to Dr. Rothman's Exhibit Number this one, the one that looks like this. 6 Q. View seen that happen? 1 Again, 1 - I don't know. I 16 the don't know. I 16 the don't			l	
There is some outliers on the low end and outliers on the high end. But the vast majority of them.				
7				
8 Q. Do you really expect in any set of studies in anything that you've ever done, that the risk ratios be ever done, that the risk ratios be ever done, that the risk ratios be exactly the same? 11 Q. Go ahead. 12 A. To be exactly the same? 12 A. So when I look at numbers, I C. Go ahead. 13 Again, it depends upon the studies that I'm comparing. 14 range. 15 Q. In fact, wouldn't you be 15 ususpicious of a set of studies of any 16 design which had exactly the same risk 17 no idea, because I know of the biases 18 ratio? 18 majority of them. 18 A. But your — so your — Q. Go ahead. 19 A. So when I look at numbers, I are range. 10 A. So when I look at numbers, I are range. 11 As to whether or not the true risk ratio is in that range, I have no idea, because I know of the biases that exist, especially in the case-control studies. 19 MS. MILLER: Objection. 19 C. Now, didn't Dr. — have you calculated a confounding — how big a confounder would have to be in order to create a risk ratio of 1.3? 10 Q. Have you ever seen that happen, a group of five studies where 19 they all have exact same risk ratio? 10 depends upon many factors. 10 Q. Have you ever seen that happen, a group of five studies where 10 depends upon many factors. 11 Q. Have you ever seen that happen, a group of five studies where 10 depends upon many factors. 12 Q. Well, how big would it have to be? 10 depends upon many factors. 13 depends upon many factors. 14 A. I can't answer that because 1 need to know many things in order to calculate that. 25 Q. If you go back to Dr. 26 Rothman's Exhibit Number — this one, the one that looks like this. 27 Q. If you go back to Dr. 28 Rothman's Exhibit Number — this one, the one that looks like this. 29 MR. TISI: 14 A. Yes, I have it. 20 Q. Okay. Here's a section in here, a paragraph on confounding in the case-control studies, on Page 5. 21 Do you've seen that Planch to the page 5. 29 Do you've seen that loon't know. I 16 there are a paragraph on confounding in the case-control studies, on Page 5. 2				
9 set of studies in anything that you've ever done, that the risk ratios be exactly the same? 11 Q. Go ahead. 12 A. To be exactly the same? 12 A. So when I look at numbers, I can say that those numbers fall in that range. 13 Again, it depends upon the studies that I'm comparing. 20 In fact, wouldn't you be suspicious of a set of studies of any design which had exactly the same risk ratio? 18 MS. MILLER: Objection. 19 MS. MILLER: Objection. 19 MS. MILLER: Objection. 19 Confounding how big a tand so forth. 23 at and so forth. 24 MS. MILLER: Objection. 25 MS. MILLER: Objection. 26 MS. MILLER: Objection. 27 MS. MILLER: Objection. 28 MS. MILLER: Objection. 29 MS. MILLER: Objection. 20 MS. MILLER: Objection. 20 MS. MILLER: Objection. 21 MS. MILLER: Objection. 22 MS. MILLER: Objection. 23 MS. MILLER: Objection. 24 MS. MILLER: Objection. 25 MS. MILLER: Objection. 26 MS. MILLER: Objection. 27 MS. MILLER: Objection. 28 MS. MILLER: Objection. 29 MS. MILLER: Objection. 20 MR. SOILEAU: It should be one that looks like this. 20 MR. SOILEAU: It should be one that looks like this. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 22 MS. MILLER: Objection. 23 MS. MILLER: Objection. 24 MR. SOILEAU: It should be one that looks like this. 20 MR. SOILEAU: It should be one that looks like this. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 22 MS. MILLER: Objection. 23 MS. MILLER: Objection. 24 MR. SOILEAU: It should be one that looks like this. 22 MS. MILLER: Objection. 25 MS. MILLER: Objection. 26 MR. SOILEAU: It should be one that looks like this. 27 MR. SOILEAU: It should be one that looks like this. 28 MS. MILLER: Objection. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 21 MS. MILLER: Objection. 22 MS. MILLER: Objection. 23 MS. MILLER: Objection. 24 MS. MILLER: Objection. 25 MS. MILLER: Objection. 26 MS. MILLER: Objection. 27 MS. MILLER: Objection. 28 MS. MILLER: Objection. 29 MS. MILLER: Objection. 20 MS. SOILEAU: It should be one t				
10 evar done, that the risk ratios be exactly the same? 11 Q. Go ahead. 12 A. To be exactly the same? 12 A. So when I look at numbers, I 13 Again, it depends upon the studies that I'm comparing. 14 range. 15 Q. In fact, wouldn't you be 15 suspicious of a set of studies of any 16 design which had exactly the same risk 17 range. 18 ratio? MS. MILLER: Objection. 19 MS. MILLER: Objection. 19 MS. MILLER: Objection. 19 case-control studies. 10 Q. Have you ever seen that happen, a group of five studies where 3 they are they all have exact same risk ratio? 4 MS. MILLER: Objection. 5 THE WITNESS: The exact 6 same - I mean, to how many decimal places? I've seen studies 7 Rothman's Exhibit Number - this one, the one that looks like this. Q. You've seen that happen? A. Again, I I don't know. I 16 Rothman's Exhibit Number - this one case-control studies, or large 18 MR. SOILEAU: It should be 21 Rothman's Exhibit Number - this one, the one that looks like this. Q. Okay. Here's a section in here, a paragraph on confounding in the case-control studies, or Page 5. Rothman's Exhibit Number - this one, the one that looks like this. Q. Okay. Here's a section in here, a paragraph on confounding in the case-control studies, on Page 5. Rothman's Exhibit,			l	* *
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A. To be exactly the same? Again, it depends upon the studies that I'm comparing. Q. In fact, wouldn't you be suspicious of a set of studies of any design which had exactly the same risk ratio? MS. MILLER: Objection. THE WITNESS: Again, I would have to see it depends on what the studies are that I'm looking at and so forth. BY MR. TISI: Page 511 Q. Have you ever seen that happen, a group of five studies where they all have exact same risk ratio? MS. MILLER: Objection. Page 511 Q. Have you ever seen that happen, a group of five studies where they all have exact same risk ratio? MS. MILLER: Objection. Page 511 Q. Have you ever seen that happen, a group of five studies where they all have exact same risk ratio? MS. MILLER: Objection. Page 511 Q. Have you ever seen that happen, a group of five studies where they all have exact same risk ratio? MS. MILLER: Objection. Page 511 Q. Have you ever seen that happen, a group of five studies where they all have exact same risk ratio? MS. MILLER: Objection. THE WITNESS: The exact Same I mean, to how many decimal places? I've seen studies MS. MILLER: Objection. THE WITNESS: The exact Same I mean, to how many decimal places? I've seen studies MS. MILLER: Objection. MR. SOILEAU: It should be case-control studies. Q. Now, didn't Dr have you calculated a confounding how big a confounder would have to be in order to create a risk ratio of 1.3? A. I think it depends. It Page 513 depends upon many factors. Q. Well, how big would it have to be? A. I can't answer that because I need to know many things in order to calculate that. Q. If you go back to Dr. Rothman's Exhibit Number this one, the one that looks like this. MR. SOILEAU: It should be one that looks like this. Q. Okay. Here's a section in here, a paragraph on confounding in the here, a paragraph on confounding in the case-control studies, A. I can't answer that I'm can say that those numbers fall in that range. A. I can't answer that I'm can say that those numbers, I A.				•
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	17	mean, I it depends upon what level you	17	case-control studies, on Page 5.
10 would say oh look you know all these 10 A. Ves I see that same and the	18	are measuring at, is the same. If one		Do you see that?
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20 have a risk ratio of one because someone 20 Q. Okay. Can you read that	20		20	Q. Okay. Can you read that
21 rounded 1.2 down to one, 1.1 down to one, 21 paragraph? You can read it to yourself.	21	rounded 1.2 down to one, 1.1 down to one,	21	paragraph? You can read it to yourself.
22 then, yes, that study could have all the 22 A. You know, I see that	22		22	
23 same. 23 Q. I just asked you to read it.	23	•	23	Q. I just asked you to read it.
Q. So, Doctor, let me ask you 24 There's no question pending.	24	Q. So, Doctor, let me ask you	24	There's no question pending.

129 (Pages 510 to 513)

	Page 514		Page 516
1	A. Okay. Okay, sorry. Yes, I	1	get it?
2	read that.	2	THE WITNESS: That would be
3	Q. Okay. Does he not say that,	3	great. That's the one with the
4	"Family history, ethnicity, obesity and	4	douching?
5	some reproductive risk factors are	5	MS. MILLER: Sure. Let's go
6	positively associated with the risk of	6	off the record, and I'll get it.
7	ovarian cancer"?	7	THE VIDEOGRAPHER: The time
8	A. Yes.	8	is 5:09 p.m. Off the record.
9	Q. He says, even if you combine	9	(Brief pause.)
10	all of those together, they would not	10	THE VIDEOGRAPHER: The time
11	explain increased risk?	11	is 5:11 p.m. Back on the record.
12	A. You know, he states that	12	BY MR. TISI:
13	there, but I would need to see the	13	Q. Okay. So let me turn to
14	calculation. I don't see any	14	dose-response, which is another area you
15	calculation. So I don't know if that	15	spend a lot of time on. And I'm going to
16	statement is correct or not.	16	spend rest of my time on dose-response,
17	Q. Well, have you done the	17	which is another of Hill's criteria.
18	calculations that would say that how	18	First of all, do you agree
19	big the confounding would have to be in	19	with me that Bradford Hill said himself
20	order to explain the consistent risks	20	that dose-response was not a required
21	seen across all these case-control	21	finding in order to make a causation
22	studies?	22	assessment, correct?
23	MS. MILLER: Objection.	23	A. I believe Bradford Hill
24	THE WITNESS: I have not	24	indicates that none of these are are a
	Page 515		Page 517
1	done that calculation, but I don't	1	requirement to establish causation, and I
2	see a calculation here either.	2	agree with that.
3	BY MR. TISI:	3	Q. Okay. The next the next
4	Q. I'm not asking you. He's	4	statement on page turn to Page 19 of
5	he made his assertion. You're here, I'm	5	your report. On Page 19, you say and
6	getting to ask you questions. You've	6	it's your general discussion of
7	made a big deal about confounding in your	7	dose-response.
8	report. A big deal.	8	Do you see that?
9	I'm asking you, have you	9	A. Under biological
10	made any calculation as to how big the	10	Q. No. Above above
11	confounder would have to be to explain	11	plausible yes, under above
12	what the meta-analysis show as	12	plausibility.
13	approximately 1.3 risk associated with	13	A. Oh, so we're on 19.
14	ovarian cancer and talc?	14	Q. Yes.
15	MS. MILLER: Objection.	15	A. Okay.
16	THE WITNESS: Ågain, I I	16	Q. You talk about biologic
17	have not made such a calculation,	17	gradient. You start out by saying it's
18	but can I see is it the	18	not necessary. And the next but the
19	Gonzalez study?	19	next paragraph is what I'm going to ask
20	BY MR. TISI:	20	you about.
21	Q. Did you bring it with you?	21	A. I dent see where I say it's
22	MS. MILLER: I've got all	22	not necessary.
23	the studies in the next room. Do	23	Q. Okay.
24	you want to go off the record and	24	A. I see that I see if

130 (Pages 514 to 517)

	Page 518		Page 520
1	dose-response is seen, it's more likely	1	A. I give citations for that.
2	the association is causal.	2	So you're going to have to bear with me.
3	Q. Okay. So let's go to the	3	And I will find
4	next paragraph. It says, "Regardless of	4	So 30 and 31. "Hence,
5	the nature of the dose-response	5	observational studies that yield small to
6	relationship, it needs to be demonstrated	6	modest levels of association require a
7	consistently across available studies.	7	higher level of supporting evidence to
8	Specifically the same type of	8	reach a conclusion of causality than do
9	dose-response relationship needs to be	9	studies with strong levels of
10	exhibited in the different studies. If a	10	association."
11	threshold relationship is hypothesized,	11	Q. Okay. So if I look at 30
12	it would require evidence of a threshold	12	and 31, references to those will be in
13	value as well, and the value is similar	13	there?
14	across studies.	14	A. That will support that
15	"If only a few studies	15	statement. Mm-hmm.
16	exhibit a dose-response rather than all,	16	Q. Okay. I'll look them up.
17	this criterion" "criterion would not	17	So now let's go let's go
18	be convincingly met."	18	to the next let's go to exhibit
19	I'm going to have that	19	number the exhibit that I just gave
20	marked as Exhibit Number 36 (sic). I	20	you, the pull-out of your report.
21	just pulled that paragraph out.	21	We agreed that, okay
22	(Document marked for	22	where is your statement that
23	identification as Exhibit	23	dose-response needs to be demonstrated
24	Ballman-30.)	24	consistently across the available
	Page 519		Page 521
1	BY MR. TISI:	1	studies?
2	Q. First of all, you would	2	A. Well, I think I'm sort of
3	agree with me would you agree with me	3	explaining what I mean by consistently.
4	that you have not cited a single	4	I mean, if one study out of 40 had a
5	reference for any of those statements?	5	dose-response, that likely is just due to
6	A. I just think it's common	6	the fact of multiple comparisons. So
7	knowledge in terms of the general	7	that would not establish a dose-response.
8	principles of epidemiology for	8	So dose-response is very
9	establishing a dose-response.	9	similar to establishing whether I
10	Q. So where is your I'm	10	mean, consistency is sort of implied in
11	going to hand you Exhibit Number 30. I'm	11	terms of dose-response. You can't have
12	going ask you about the highlighted ones.	12	one study showing a dose-response out of
13	Where is your authority	13	many and conclude there is a
14	for in fact, you had indicated that	14	dose-response.
15	dose-response wasn't even necessary	15	Q. Okay. Actually I'm
16	according to Bradford Hill, right? You	16	actually asking you this.
17	agreed with that?	17	Regardless of the nature of
18	A. Qualified. I would say	18	the dose-response, it needs to be
19	and I state throughout my report, that if	19	demonstrated consistently across the
20	the initial association that's	20	available studies. Where is your support
21	established is weak then it's important	21	for that statement that it needs to be
22	that other criteria be met.	22	consistent across all across available
23	Q. And where is your basis for	23	studies?
24	that?	24	A. So just just common sense

131 (Pages 518 to 521)

	Page 522		Page 524
1	off the top of my head, but I can go	1	nine years .9. Ten to 19 is 1.4.
1 2 3	through and try to find references if	2	Greater than 20, it's .9.
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	you'd like.	3	So that's going up and down.
4	But if something is causal,	4	Q. Can I stop and ask you that
5	it would be quite odd that it would only	5	question? Do you know how many people
6	have a dose-response in, say, one out of	6	were in the last category?
7	40 studies. And again, I think I	7	A. No. I have no idea how many
8	explained that in my previous answer.	8	people were in the last category. But
9	Q. The next sentence says,	9	the width of the confidence intervals
10	"Specifically, the same type of	10	there look like it's relatively close to
11	dose-response relationship needs to be	11	perhaps what's in the previous
12	exhibited in the different studies."	12	categories.
13	Could you you have no	13	Q. Okay. Let me ask you
14	citation for that, right?	14	another question here. On the next
15	A. Again, if something is	15	sentence?
16	causal, it would be odd that in one	16	A. Wait I can show you one
17	study, it's a threshold effect, and in	17	
18		18	where Whittemore, it goes down. It's
	another study it's a sign effect, and yet	19	1.9, it's 1.6, and greater than ten years
19	in another study it's a decreasing	20	it's 1.1.
20	effect, and in another study it's an	21	Q. Is that is that
21	increasing effect. What would you		never/ever? What is that?
22	conclude? How could you conclude it to	22	A. That's duration.
23	be causal?	23	Q. Okay. So wouldn't the best
24	Q. Well, it depends on what you	24	measurement be frequency?
	Page 523		Page 525
1	measure, correct? It depends on the	1	MS. MILLER: Objection.
2	power of the study. It depends upon a	2	BY MR. TISI:
3	lot of things, right?	3	Q. Or total number total
4	A. Dose-response looks for	4	number of applications?
5	patterns. I'm not even talking	5	MS. MILLER: I assume my
6	statistically significant here. So	6	objection applies to the second
7	things that you just mentioned are	7	question.
8	talking about statistical significance,	8	MR. TISI: Yes, it would.
9	which you say people are going to	9	BY MR. TISI:
10	abandoned in the future.	10	Q. Wouldn't the total
11	I'm talking about looking	11	MS. MILLER: That was the
12	for evidence that supports a	12	second question.
13	dose-response. And if you have one study	13	BY MR. TISI:
14	that it shows it's going up and down,	14	Q. Wouldn't
15	another study that it's going down,	15	MS. MILLER: Those are two
16	another study that even if it's not	16	different things.
17	statistically significant, that would	17	MR. TISI: I got it. I got
18	raise red flags.	18	it.
19	Q. What study, what study	19	BY MR. TISI:
20	showed that it was going down? Would	20	Q. Wouldn't the total
21	that be the Huncharek study?	21	wouldn't the best measure be the total
22	A. I can tell you in a minute.	22	number of applications?
23	Wong? So well, here's one that's up	23	A. Well, if we're getting into
24	and down. So Wong, one point one to	24	measurements, first of all, there's no
	<i>S</i> , 1 · · · ·		, ,

132 (Pages 522 to 525)

	Page 526		Page 528
1	valid instrument as to how to best	1	if you do five studies would you expect
2	measure talc exposure. So having no	2	the same relative risk.
3	valid instrument in the first place, I	3	And, you know, these all
4	don't think one can say what's the best	4	could be sort of the same underlying
5	measure for a dose-response. If	5	relative risk and just come up with the
6	something is truly causal and you are	6	variations, because the numbers don't
7	measuring increasing dose with some	7	differ that much. So it's sort of a flat
8	metric that has increasing, so duration	8	relationship.
9	would be increasing, that, you know, the	9	Q. This is this is a
10	longer you use, the more likely you would	10	meta-analysis, isn't it? This is looking
11	get ovarian cancer.	11	at all studies together?
12	Frequency would be also a	12	A. Yeah, I don't know if that
13	measure of dose-response because using it	13	makes it any stronger or not because,
14	once a week is, you know, much less than	14	again, there's no valid measure that was
15	using it every day. And so they are all	15	used. So combining a bunch of studies
16	some measures of dose-response.	16	that use a bunch of different measures
17	So if there's a true causal	17	together and no valid measure of talc
18	relationship, one would expect seeing	18	exposure in general, and then no, you
19	consistent sort of dose-responses across	19	know, valid measure as to what the total
20	any of those measures.	20	applications were or consistent
21	Q. And the Terry study did show	21	standardized measure, you know, it's hard
22	that, didn't it, when you combine	22	to interpret
23	frequency and duration, correct?	23	Q. And Penninkilampi
24	A. Well, that it it looks	24	A the pooled
	Page 527		Page 529
1	like do we have the Terry study?	1	Q. I'm sorry. I didn't mean to
2	Q. I'm just asking you have	2	interrupt you.
3	the results in your in your Table 3.	3	A. Sorry. It's just hard to
4	A. Oh, in Table 3. Thank you.	4	interpret a pooled study.
5	Q. Mm-hmm.	5	Q. And Penninkilampi also
6	A. Yeah, I see it now. Thanks.	6	looked at less than 3,600 applications
7	I thought it was here. You know, I	7	and more than 3,600 applications, and
8	I I actually gave it the benefit of	8	there was a difference there as well,
9	the doubt because there's a couple issues	9	right?
10	here. One needs to so the test for	10	A. And, again, if a test for a
11	trend is not statistically significant.	11	trend were done the correct way where you
12	And if you look at this, you	12	do not have the never category in, it's
13	see that it goes from 1.14 to 1.23 down	13	likely that that would not be a
14	to 1.22 and then up to 1.32. So I don't	14	statistically significant difference.
15	know if I'd call that a	15	But that aside, looking at these point
16	Q. So you're kind of quibbling	16	estimates, those again could probably
17	with the Q3 going down from 1.23 to 1.22,	17	happen it doesn't indicate sort of a
18	as showing, oops, it dropped a tenth of	18	clear difference between those two
19	the point?	19	numbers
20	A. Well, I'm quibbling that	20	Q. How about Schildkraut?
21	actually if you look at, you know, the	21	A and those point
22	last three values there, you know, it	22	estimates.
23	well may be the case that there are	23	Q. In your study in your
24	really as you were pointing out, that	24	chart, on the prior page, on Table 1,

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		Ι	
	Page 530		Page 532
1	Schildkraut shows less than 3,600, had a	1	this criterion more important.
2	1.16, and at greater than 3,600 had a	2	And you say that those
3	1.67, to a P-value of .01.	1 2 3 4 5	two there's no citation here. But you
4	A. That's not really that's	4	gave me the citation to that concept
5	not really a test for dose-response	5	earlier, right?
6	because there's only two levels. So it's	6	A. I did.
7	sort of like just comparing two levels to	7	Q. Okay. The next paragraph
8	each other. You don't know for certain.	8	says, "To establish a dose-response
9	Q. So so let me go back to	9	relationship, the necessary evidence is
10	your statement. It says Exhibit	10	increasing risk with increasing dose,
11	Number exhibit right there, what	11	statistical significance, and
12	number what exhibit?	12	consistency. Consistency in this context
13	A. 30.	13	includes repeated demonstration of the
14	Q. Exhibit 30. Last sentence	14	result across different studies,
15	says, "If only a few studies exhibit	15	including different study designs and
16	dose-response rather than all, the	16	different measures of dose."
17	criterion would not be convincingly met."	17	Do you see that?
18	First of all, you have no	18	A. Mm-hmm.
19	citation for that either, do you?	19	Q. And I have that pulled out
20	MS. MILLER: Objection.	20	here as well as Exhibit Number
21	THE WITNESS: Other than	21	(Document marked for
22	what we discussed before, because	22	identification as Exhibit
23	if there's true causality, it	23	Ballman-31.)
24	would be quite odd that only,	24	BY MR. TISI:
	Page 531		Page 533
	like, two studies show any sort of		Q. As with the prior statement,
1 2 3 4 5 6 7	dose-response relationship and the	1 2 3 4 5 6	you don't have a single citation for that
3	rest do not.	3	do you?
4	And you know, we can do the	4	A. I think we discussed all
5	counting exercise and go through	5	this before in Exhibit 30 about why
6	and see of all these, these	6	consistency is important. And why the
	different measures of		same type of dose-response needs to be
8	dose-response, how many of them	8	important. I think I
9	actually are potentially. And I	9	Q. But you didn't cite it
	don't even know if I would call	10	there, and you don't cite it here?
11	the highlighted ones showing a	11	MS. MILLER: Objection.
12	dose-response relationship.	12	BY MR. TISI:
13	BY MR. TISI:	13	Q. You didn't cite it in the
14	Q. Let's go to the next Page	14	prior exhibit, and you don't cite
15	29 of your report. You say on Page	15	anything here.
16 17	29, you say, "Given" sorry. Let me	16 17	MS. MILLER: Sorry. I
18	see where I find it. Where is the word	18	thought the last thing was a
19	"given"? Hold on.	19	question, so I objected to that.
20	Oh, okay. On the first	20	But this is a new question. I
	paragraph you say second sentence, you	21	object to this one as well.
21 22	say, "Given that available data are from observational data and the association is	22	BY MR. TISI: Q. Yeah. Okay. We looked at
22			•
22	weak additional avidence is required to	/ /	TUZO
23	weak, additional evidence is required to rule out a spurious association making	23 24	two A. Yeah, yeah, yeah, yeah.

134 (Pages 530 to 533)

Page 536 Page 534 1 Q. -- Exhibit Number 30, and 1 even know if there's any valid measure of 2 2 Exhibit Number 31. They're both the same 3 3 statement about consistency, and you Q. But you would agree with me 4 don't have a citation for either one of that both of these are peer-reviewed 4 5 5 those? studies, and when you looked at the total 6 A. And I explained why there is 6 number of applications, which is a 7 8 7 measure of dose, we saw an increased no citation is, again, that if there is a causal relationship that is in fact true, 8 risk. Whether you think it's the right 9 one would expect to see the same type of 9 inference or not is fine, but you agree 10 relationship because if it goes up in one 10 with that -- that that's what they 11 study, down in another, up and down, or 11 showed, both Penninkilampi and Terry. 12 stays flat, it's hard to understand how 12 And that's on Page 34 of your report. something that truly has a causal effect A. I don't think I said that. 13 13 14 would come up with these different sort 14 I think I said Penninkilampi, you can't 15 15 of dose-responses. even infer dose-response because there's 16 And again, consistency is, 16 only two doses. It's only two lines. So 17 again, that you don't have these 17 you can't -- I mean, only like -- you 18 different patterns going on in the data. 18 know, dichotomous things. 19 Q. But you have no citation for 19 So one can't really infer a 20 that whatsoever, and the meta-analyses 20 dose-response, and it's not even clear 21 that were done, the two of them that 21 that those two numbers in reality differ 22 looked at it, whether it be Terry -- or 22 from each other because we had this 23 you pointed out. I'm blanking on the 23 discussion about, you know, point 24 other one. Both showed evident of a estimates, you know, not having -- that 24 Page 535 Page 537 1 dose-response -- Terry and 1 they don't have to be the same, and if 2 Penninkilampi -- that looked at total 2 they are pretty close to each other, who 3 number of -- those are the only two that 3 knows. 4 looked at the total number of 4 So that's the same with the 5 5 applications, and they both showed Terry study too. So I do not agree. 6 increasing dose -- increasing risk with 6 Q. Okay. But different -- you 7 increasing number of applications, true? 7 know that in those studies, that both of 8 A. That is -- again, there's no 8 them, they noted an evidence of 9 evidence that that's the right metric 9 dose-response, correct? because there's no validated instrument MS. MILLER: Objection. 10 10 THE WITNESS: I would have 11 for measuring talc in the first place. 11 12 And so it's sort of cherry-picking to 12 to see the studies and see exactly 13 say, oh, okay, that one shows it but a 13 how they stated their conclusions. 14 measure of frequency doesn't show it, a 14 Can you --15 measure of duration doesn't show it, even BY MR. TISI: 15 16 16 Q. I'm just -- I'm just asking within the same studies. 17 And so I think most 17 you, do you recall that that was the 18 reasonable people would say, if there 18 case? 19 really is a dose-response, why does it 19 A. Off the --20 have to be sort of the total lifetime 20 MS. MILLER: Objection. 21 applications, but I'm not seeing it in 21 MR. LOCKE: Objection. 22 22 the total of years, which goes into that BY MR. TISI: 23 calculation, nor the frequency, which 23 Q. I'm asking you, do you 24 goes into that calculation. And I don't 24 recall or not? If you don't recall,

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	Page 538		Page 540
1	that's fine.	1	BY MR. TISI:
2	A. Off the top of my head, I do	2	Q. In any of the studies.
3	not recall.	3	A. Well, I know it looks like
4	Q. Okay. I want to ask you a	4	Terry did a test for trend that does not
5	couple questions about meta-analysis and	5	include the never/none category. And
6	kind of move on from there.	6	it's P-value is .17. So and that is a
7	First of all, not all	7	flat relationship.
8	dose-responses are monotonic, are they?	8	Checking to see.
9	MS. MILLER: Objection.	9	So Cramer 1999 did the
10	THE WITNESS: I believe	10	correct test. He did a trend test. And
11	there can be different type of	11	his P-value of .48 and .16, that's a
12	dose-responses.	12	trend test that does not include the
13	BY MR. TISI:	13	never category.
14	Q. Okay. Have you considered	14	Q. Right, but when he looked at
15	that?	15	the total number of applications, you saw
16	A. In what sense?	16	an increase that went from 1.1 to 1.38,
17	Q. Have you considered it at	17	went down to 1.36, and up to 1.49.
18	all?	18	A. I think we're talking about
19	MS. MILLER: Objection.	19	the different Cramer. Sorry.
20	THE WITNESS: I think I	20	Q. Cramer 2016?
21	just in I mean, in what sense?	21	A. No. I was looking I said
22	BY MR. TISI:	22	Cramer 1999. I'm sorry.
23	Q. In connection with	23	Q. I'm looking
24	dose-response?	24	A. I misspoke that.
	Page 539		Page 541
1	A. Well, in cancer it would be	1	You asked me which ones did
2	very rare in a non-monotonic, one	2	the correct trend test. And I'm saying
3	would be that the higher the dose, the	3	Cramer 1999.
4	less the risk. It could be concave. I	4	Q. What about Cramer 2016?
5	mean, that would be quite	5	MS. MILLER: You didn't
6	Q. Could it	6	misspeak. You said 1999.
7	A bizarre different from	7	BY MR. TISI:
8	any other cancers I've seen.	8	Q. What about Cramer 2016?
9	Q. Have you ever heard	9	A. That one does that test
10	depletion of the susceptibles?	10	for trend includes the never versus none
11	A. No, I have not.	11	category.
12	Q. Okay. That as people die,	12	Q. All right. Okay. Let me
13	they're not going to be showing a	13	ask you a couple questions about about
14	anyway. I'll move on.	14	meta-analyses.
15	What about a trend test	15	We've been talking about the
16	when when the trend test was used in	16	individual studies. Is it your view
17	non-users, did they show a dose-response?	17	that you know, you mentioned several
18	MS. MILLER: Objection.	18	times.
19	BY MR. TISI:	19	MR. TISI: I'm sorry. I'm
20	Q. When a trend test was used,	20	sorry. You reached over. You
21	did it show a dose-response?	21	reached over that time.
22	MS. MILLER: Well, where?	22	MS. MILLER: I'm moving
23	THE WITNESS: Trend test	23	back.
24	used where, meaning what?	l .	
	used where meaning what?	24	MR. TISI: You reached over

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	Page 542		Page 544
1	that time.	1	not.
2	MS. MILLER: I'm so sorry.	2	Looking at the cohort
3	MR. TISI: And you kicked	3	studies, none of them found a
4	me.	4	statistically significant
5	MS. MILLER: I'm so sorry.	5	association.
6	MR. TISI: And I don't take	6	And the magnitude of the
7	it personally.	7	risk ratios for these groups of
8	MS. SHARKO: Can I do that	8	studies also vary.
9	too.	9	BY MR. TISI:
10	MS. MILLER: I had to	10	Q. Would you agree with me that
11	stretch my legs. It's been a very	11	it is wrong to simply count the number
12	long day. I can only stretch that	12	of count the number of studies and
13	far.	13	kind of do it like a democracy. There
14	BY MR. TISI:	14	are a certain number of studies that say
15	Q. Doctor, you mentioned	15	X that's not statistically significant.
16	several times that a certain number of	16	Certain number that say Y, they are, and
17	case-control studies found a	17	the non-statistical numbers win?
18	statistically significant result, and a	18	A. It depends.
19	certain found didn't. And then a	19	Q. Okay. Do you ever do that?
20	certain number of case cohort studies	20	A. It depends. I mean, again,
21	did not find a statistically significant	21	I it depends upon many things.
22	result.	22	You know, if I have, like,
23	Do you remember that kind of	23	you know, randomized controlled trials,
24	general testimony?	24	you know, and, you know, all of them show
	Page 543		Page 545
1	MS. MILLER: Objection.	1	an effect, and then or none of them show
2	BY MR. TISI:	2	an effect, let's say. So I have
3	Q. Yeah, I mean. Yes?	3	randomized control trials
4	A. What's your question?	4	Q. But that's not what we're
5	Q. My question is do you	5	talking about. We're not talking about
6	remember that testimony. I'm kind of	6	randomized controlled.
7	referring you. Remember you listed,	7	Let's just talk about, for
8	well, you know, you kind of looked at	8	example, in the case-control studies.
9	them together. And some were	9	A. You asked me if there are
10	statistically significant, some weren't.	10	any situations, and I was trying to
11	Some were in case-control, some were in	11	answer that.
12	cohort. Do you remember that testimony?	12	Q. And we're not talking about
13	MS. MILLER: Objection.	13	that. And I apologize, because we're
14	MR. TISI: You can object.	14	talking about in the context of this
15	THE WITNESS: So what I	15	case. There are no randomized control
16	what I I recall sort of when	16	trials because it would be unethical to
17	looking at the evidence in	17	do so, correct?
18	totality is that you know, the	18	MS. MILLER: Objection.
19	the hospital-based controls did	19	THE WITNESS: Again, I
20	not find statistical significance.	20	talked about reasons why, you
21	The population-based	21	know, randomized control studies
22	controlled studies case-control	22	are not done and, you know
23	studies, some found a statistical	23	yeah, so anyway.
24	significant association, some did	24	BY MR. TISI:

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	Page 546		Page 548
1	Q. They could not be done here	1	done, and the intent for
2	because you can't test somebody	2	meta-analyses is that the
3	assuming you can even design such a	3	randomized controlled trials, back
4	study, you couldn't with the	4	when trials were starting to
5	hypothesis being, let's expose people to	5	become popular, were too small on
6	something and see whether it causes	6	their own to have statistical
7	cancer?	7	significance.
8	MS. MILLER: Objection.	8	So the idea was there were
9	BY MR. TISI:	9	several trials done in the same
10	Q. It would be unethical to do	10	disease, essentially, of the same
11	that, right?	11	treatments, and so to get the
12	A. Yeah. I mean, just in	12	necessary power in order to make a
13	general, one would not do a clinical	13	definitive statement,
14	trial and say, okay, we're going to	14	meta-analyses were used.
15	expose people to something that there's	15	MR. TISI: Okay.
16	evidence for that it's harmful, but I	16	(Document marked for
17	don't know if it applies in this case.	17	identification as Exhibit
18	It's been purported that the	18	Ballman-32.)
19	use of talc is harmful. But I don't know	19	BY MR. TISI:
20	if there is	20	Q. Let me show you a textbook,
21	Q. Would you ever participate	21	a chapter of a textbook called
22	in a study that would test the hypothesis	22	"Introduction to Meta-Analyses" by
23	that talc would cause ovarian cancer?	23	Borenstein. Is that something that
24	MS. MILLER: Objection.	24	you've ever seen before?
	Page 547		Page 549
1	BY MR. TISI:	1	A. I haven't seen this
2	Q. A clinical trial?	2	particular textbook.
3	MS. MILLER: Objection.	3	Q. I'm marking it as Exhibit
4	THE WITNESS: Again, I don't	4	Number 32? And I pulled out
5	think people would do such a	5	MS. MILLER: Is this Xerox
6	clinical trial	6	on cardboard?
7	BY MR. TISI:	7	MR. TISI: I know. The
8	Q. And you wouldn't	8	machine, it was weird. It was the
9	A with that question.	9	FedEx office.
10	I mean, I would participate	10	BY MR. TISI:
11	in one if it says talc would prevent sort	11	Q. Chapter 28 is called "Vote
12	of this from happening because I would	12	Counting, a New Name For an Old Problem."
13	see a benefit. I wouldn't participate in	13	Do you see that?
14	a trial where there's no benefit being	14	A. I'm sorry. What page are we
15	hypothesized.	15	on?
16	Q. So now the question is, why	16	Q. It's chapter 28. If you go
17	do we do meta-analysis? Why do we do	17	in, there's the chapter there?
18	meta-analysis?	18	A. Oh, I see. It says "Vote
19	MS. MILLER: Objection.	19	Counting, a New Name For an Old Problem."
20	THE WITNESS: Well,	20	Yes.
21	meta-analysis, and the history of	21	Q. So just you would agree
22	meta-analysis are that they were	22	with me just looking at the number of
23	first used for randomized	23	studies that show statistically
24	controlled trials. And they were	24	significant results and the numbers that

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don't is not a good scientific methodology, correct? A A Again, it depends. Thought it was. At the very end of in statement—and I guess that was a pretty non-controversial thing, at least fit thought it was. At the very end, there's a box that says "Summary Points" on Page 255. In going to ask you if this is irrue. "Vote counting, I mean counting the number of studies that are not statistically significant." Do you see that? Do you see that? A. Yes, I see what you read. Q. And it says, "Vote counting the same treatment, and all of them number of studies that are not stated there. Page 551 I arge effects may yield nonsignificant P-value as evidence that an effect is absent. In a valid approach." P-values due to inadequate statistical power. Therefore, vote counting is never a valid approach." A. Yes, I see that — that stated there. Q. Do you agree that ovte counting — in other words, counting the number of studies that are not statistically significant and comparing them with the numbers that are, is never a valid approach." A. Again, I said it depends. A. Again, I said it depends. A. We do mera-analyses when the don't have a valid approach? The really is no effect. So if all the studies were of the same only found a statistically significant really is no effect. Q. And that — that's why we do meta-analyses, correct? A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the done that hat's why in the meta-analyses in that are not that's why in the meta-analyses in that that puts in meta-analyses in that that puts in meta-analyses in that that we been published. A. We do mera-analyses when the don't have been published. A. We do mera-analyses when the don't have be		Page 550		Page 552
2 methodology, correct? 3 A. Again, it depends. 4 Q. Well, at the very end of in 5 statement — and I guess that was a 6 pretty non-controversial thing, at least 7 I thought it was. At the very end, 8 there's a box that says "Summary Points" 9 on Page 255. 10 I'm going to ask you if this 11 is true. "Vote counting" — and by vote 12 counting. I mean counting the number of 13 positive and negative studies. "Vote 14 counting is the process of counting the 15 number of studies that are not (sic) 16 statistically significant and comparing 17 those with the number that are not 18 statistically significant." 19 Do you see that? 20 A. Yes, I see what you read. 21 Q. And it says, "Vote counting 22 treats a nonsignificant P-value as 23 evidence that an effect is absent. In 24 fact, though small, moderate, and even Page 551 1 large effects may yield nonsignificant 2 P-values due to inadequate statistical 3 power. Therefore, vote counting its never 4 a valid approach." 5 A. Yes, I see that – that 6 stated there. 7 Q. Do you agree that it is appropriate to use meta-analyses to combine observational studies, of different design. 16 design. 17 design. 18 design. 19 Do you see that? 10 A. Yes, I see what you read. 20 A. Yes, I see what you read. 21 Q. And it says, "Vote counting the middle approach." 22 The proposed that an effect is absent. In 23 power. Therefore, vote counting is never 4 a valid approach." 5 A. Yes, I see that – that 6 stated there. 6 counting — in other words, counting the number of studies that are not 10 statistically significant and comparing 11 them with the numbers that are, is never 12 a valid approach? 13 a A. Again, I said it depends. 14 So if all the studies were of the same 15 sample size done in the same population 16 using the same treatment, and all of them 17 were acequately powered, and, like, two 18 only found a statistically significant 19 result, and the rest did not, I think 19 them with the numbers that are, is never 20 a valid approach? 21 A. Again, I said it depends. 22 A. Yes, correc	1	don't is not a good scientific	1	studies being combined again, as I
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Q. And it says, "Vote counting treats a nonsignificant P-value as evidence that an effect is absent. In 24 fact, though small, moderate, and even Page 551 I large effects may yield nonsignificant 2 P-values due to inadequate statistical 3 power. Therefore, vote counting is never 4 a valid approach." A. Yes, I see that that 5 stated there. Q. Do you agree that vote 8 counting in other words, counting the 9 number of studies that are not 5 statistically significant and comparing 11 them with the numbers that are, is never 12 a valid approach? A. Again, I said it depends. So if all the studies were of the same 5 sample size done in the same population 16 using the same treatment, and all of them were adequately powered, and, like, two only found a statistically significant 2 meta-analyses, correct? Q. And that that 5 peer review, correct? A. Yeah, and I hope ASA comes out with a statement on that, because the intent of meta-analyses was not to Page 551 Combine observational studies. And that that 's unk in the meta-analyses or randomized trials. I've never seen any pyramid of evidence of 8 that that puts in meta-analyses of observational studies. And that that puts in meta-analyses of randomized trials. I've never seen any pyramid of evidence of 8 that that puts in meta-analyses of observational studies. And that that puts in meta-analyses of randomized trials. I've never seen any pyramid of evidence of 8 that that puts in meta-analyses of observational studies. And that that puts in meta-analyses of randomized trials. I've never seen any pyramid of evidence of 8 that that puts in meta-analyses of observational studies. And that that's unknown. Q. But I'm let me just get 1 it down. There are six meta-analyses in 1 this in this litigation, five which 1 have been published, one of which is being submitted to peer review, right, the Taher study. A. Yes, correct. Q. And there's there's six altogether. A. Oh, wait? Six altogether. A. Oh, wait? Six altogether. A. Oh, wait? Six altogethe		•		
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	24	A. We do meta-analyses when the	24	Q. Okay. Fine.

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	Page 554		Page 556
1	A. And okay.	1	meta-analyses of observational
2	Q. Fine. Whatever the number	2	data.
3	happens to be, it happens to be. I'm	3	BY MR. TISI:
4	doing it off the top of my head.	4	Q. Okay. And you think it
5	Are you saying that because	5	would be inappropriate to rely on that
6	all of those studies combined	6	data for consideration in the of the
7	observational studies let's just deal	7	Bradford Hill criteria for causation in
8	with that issue that that was	8	talc and ovarian cancer?
9	unscientific, and they should not have	9	MS. MILLER: Objection.
10	passed peer review?	10	THE WITNESS: As I said,
11	A. I am saying that they're	11	meta-analyses are good for
12	good for hypothesis generating, and	12	hypothesis generating, but they
13	that's about it. They are not good for	13	are not sufficient evidence to
14	making definitive statements with respect	14	to make a definitive statement
15	to things such as causality or whether	15	about causation.
16	there truly is an association.	16	BY MR. TISI:
17	Q. Do you think that those	17	Q. I didn't ask about
18	should have passed peer review. If you	18	definitive statements. I'm asking, are
19	were peer reviewers on any of the	19	they even appropriate to consider in a
20	meta-analyses that are in this case,	20	Bradford Hill analysis, or is that a
21	would you have given a green light to	21	methodologic flaw if anybody were to
22	allow those to be published?	22	consider a meta-analysis in the context
23	MS. MILLER: Objection.	23	of doing a Bradford Hill test or analysis
24	THE WITNESS: Again, they	24	for ovarian cancer and talc?
	Page 555		Page 557
1	are good for hypothesis	1	MS. MILLER: Objection.
2	generating. And I didn't say that	2	THE WITNESS: As I I do
3	hypothesis generating is not	3	cite one of the articles here that
4	not good or is not I'm	4	says I don't within Bradford
5	getting tired. I'm searching for	5	Hill, it says look at the totality
6	words here.	6	of the data. But it's more
7	I did not say that	7	important to look at the
8	hypothesis generating should not	8	individual studies and see what
9	be published.	9	the conclusion comes from there,
10	BY MR. TISI:	10	rather than a meta-analyses.
11	Q. You would agree with me that	11	So I'm not sure how a
12	people disagree with you on the value of	12	meta-analyses sort of plays into
13	meta-analyses, correct?	13	the Bradford Hill except coming up
14	MS. MILLER: Objection.	14	with some summary values.
15	THE WITNESS: Well, I I	15	BY MR. TISI:
16	don't know. All I know is JCO,	16	Q. But you do know that most
17	the journal I'm deputy editor for,	17	people looking at this question have
18	which has quite a high impact	18	looked at at the meta-analyses,
19	factor, we would never, ever	19	correct, in connection I mean, Health
20	publish a meta-analyses well, I	20	Canada did, correct? Are they wrong for
21	shouldn't say that. That's too	21	having done so?
22	strong.	22	MS. MILLER: Objection.
23	It would be very rare that we ever would publish a	23	THE WITNESS: I didn't say
24	11 11'1	24	that. I mean, I said even I've

140 (Pages 554 to 557)

	Page 558		Page 560
1	looked at the meta-analyses	1	MS. MILLER: Objection.
2	because that's the totality of the	2	THE WITNESS: And I said
3	data, to see if there's any sort	3	that when one is doing a proper
4	of additional information that it	4	sort of causal analyses that's
5	brings forward.	5	based upon, you know, established
6	BY MR. TISI:	6	epidemiology principles, one looks
7	Q. But do you remember the	7	at all studies, including
8	statement and I pulled it out there.	8	meta-analyses.
9	I think it was Exhibit Number 5. That	9	BY MR. TISI:
10	statement says that they found a	10	Q. Are they wrong for having
11	consistent result across meta-analyses	11	relied on them? Having looked at them,
12	and additional evidence is consistent	12	can they rely on them?
13	with causation.	13	MS. MILLER: Objection.
14	MS. MILLER: Who is "they"?	14	THE WITNESS: I'm not sure
15	MR. TISI: Health Canada.	15	if they relied on them from this
16	THE WITNESS: I'm trying to	16	statement here. I can't tell that
17	find Exhibit 5.	17	they relied just on meta-analyses
18	MR. LOCKE: Can I ask for a	18	or not.
19	time check?	19	BY MR. TISI:
20	MR. TISI: We've got about	20	Q. What is the journal JCO?
21	four minutes.	21	A. The Journal of Clinical
22	THE WITNESS: I'm looking	22	Oncology.
23	for Exhibit 5. Do you have it	23	Q. One final question. You
24	handy? Oh, I got it. I got it.	24	made a comment in the Taher study that
	Page 559		Page 561
1	I got it. Okay.	1	they indicated that they thought it was a
2	BY MR. TISI:	2	possible association. And you said that
3	Q. Were they wrong were	3	you thought that as a peer reviewer, they
4	Health Canada wrong in Exhibit 5 for	4	would take that out?
5	relying on that?	5	A. No. They said a possible
6	A. So I think I said that	6	causal
7	meta-analyses, it's not surprising that	7	Q. Causal association.
8	they are consistent because they are	8	A association.
9	analyzing the same set of data, and so	9	Q. And you would take you
10	one would expect	10	thought that that was something that
11	Q. I didn't ask you that. I	11	would be taken out by peer reviewers,
12	didn't ask you about consistency. I'm	12	correct?
13	asking were they wrong for even	13	A. Of of high quality
14	considering them?	14	journals, yes.
15	A. But that's a different	15	Q. And you but that's pure
16	question	16	speculation on your part, right?
17	Q. It is a different question.	17	A. No, I do not believe so.
18	A than what you just asked	18	Through all my experience in the numerous
19	me there.	19	papers that I've reviewed and both for
20	Q. I'm asking you, are they	20	JCO and as a reviewer of other things,
21	wrong for having considered them in the	21	that's pushing the data, because one
	context of looking at the causal	22	assumes no causal relationship, and you
22			
22 23 24	inference for talcum powder and ovarian cancer?	23	need evidence for it before you can state causality.

141 (Pages 558 to 561)

	Page 562		Page 564
1	Q. Would it surprise you to	1	minute.
2	know that we have meta-analyses in JCO,	2	MR. TISI: I'm totally okay.
3	correct? Would that surprise you? You	3	I'll give you I'll give you my
4	mentioned that you've never published	4	minute.
5	meta-analyses or rarely. Would that	5	Thank you very much. I have
6	surprise you?	6	no further questions.
7	A. There are meta-analyses	7	MS. MILLER: I just have a
8	MS. MILLER: Objection. She	8	few questions for you, Dr.
9	said meta-analyses objection.	9	Ballman.
10	THE WITNESS: There are	10	
11	meta-analyses in JCO of randomized	11	EXAMINATION
12	clinical trials. And in fact, one	12	
13	of the studies you showed me today	13	BY MS. MILLER:
14	was a meta-analysis. It was a	14	Q. Can you please turn back to
15	pooled analysis, of individual	15	Exhibit Number 25.
16	patient-level data.	16	MR. TISI: Which is what?
17	BY MR. TISI:	17	THE WITNESS: The National
18	Q. Okay. So is it your	18	Cancer Institute one. This one?
19	statement that JCO would not publish a	19	BY MS. MILLER:
20	meta-analyses meta-analysis of	20	Q. Can you tell me what the
21	observational data?	21	title of that exhibit is?
22	MS. MILLER: Objection.	22	A. The title is "Ovarian,
23	Misstates	23	Fallopian Tube, and Primary Peritoneal
24	THE WITNESS: I said it	24	Cancer" I don't know if there's
	Page 563		
		l .	Page 565
1		,	Page 565
1	was	1	anything under the sticker
2	was MS. MILLER:	2	anything under the sticker "Prevention, Health Professional
2 3	was MS. MILLER: Mischaracterizes her testimony.	2 3	anything under the sticker "Prevention, Health Professional Version."
2 3 4	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my	2 3 4	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document?
2 3 4 5	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're	2 3 4 5	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was
2 3 4 5 6	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk.	2 3 4 5 6	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer
2 3 4 5 6 7	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI:	2 3 4 5 6 7	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at
2 3 4 5 6 7 8	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question.	2 3 4 5 6 7 8	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established
2 3 4 5 6 7 8 9	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it	2 3 4 5 6 7 8	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I
2 3 4 5 6 7 8 9	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had	2 3 4 5 6 7 8 9	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell.
2 3 4 5 6 7 8 9 10	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said,	2 3 4 5 6 7 8 9 10	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11.
2 3 4 5 6 7 8 9 10 11 12	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely	2 3 4 5 6 7 8 9 10 11	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there.
2 3 4 5 6 7 8 9 10 11 12 13	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen.	2 3 4 5 6 7 8 9 10 11 12	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading
2 3 4 5 6 7 8 9 10 11 12 13	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would	2 3 4 5 6 7 8 9 10 11 12 13	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"?
2 3 4 5 6 7 8 9 10 11 12 13 14 15	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been	2 3 4 5 6 7 8 9 10 11 12 13 14 15	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	was MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the top of my head.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that? A. "The weight"
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the top of my head. MR. TISI: I don't think I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that? A. "The weight" Q. You did a lot of reading
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the top of my head. MR. TISI: I don't think I have any questions. I think I'm	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that? A. "The weight" Q. You did a lot of reading today. I thought we should you read,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the top of my head. MR. TISI: I don't think I have any questions. I think I'm down to the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that? A. "The weight" Q. You did a lot of reading today. I thought we should you read, too.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MS. MILLER: Mischaracterizes her testimony. Please let me finish my objection, even though you're eager to talk. BY MR. TISI: Q. You can answer the question. A. Okay. So I said that it would very rarely happen. I had corrected. I had said never, but I said, no, wait a minute, it would very rarely happen. Q. Okay. So so you would agree with me that there have been observational meta-analyses in JCO? A. I have no idea if there have been or not. I cannot say that off the top of my head. MR. TISI: I don't think I have any questions. I think I'm	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	anything under the sticker "Prevention, Health Professional Version." Q. And what is this document? A. It's a document that was published by the National Cancer Institute that's talking about who's at risk for ovarian cancer and established risk factors of ovarian cancer, I believe, as best I can tell. Q. Please turn to Page 11. A. Yes, I'm there. Q. Do you see the subheading titled "Perineal Talc Exposure"? A. Oh, yes, I see "Perineal Talc Exposure." Yes. Q. Can you please read the sentence under that? A. "The weight" Q. You did a lot of reading today. I thought we should you read,

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	Page 566		Page 568
1	perineal talc exposure and an increased	1	references for the values that
2	risk of ovarian cancer."	2	they're reporting before the
3	Q. Did Mr. Tisi read this	3	reference
4	sentence to you?	4	BY MR. TISI:
5	A. No. And it goes on to say	5	Q. So if you go to the back
6	that the result from case-control and	6	A such as, "However, a
7	cohort studies are inconsistent.	7	dose-response relationship was not
8	MS. MILLER: I have no	8	found," which is reference 42.
9	further questions.	9	Q. Can you look at Page 16 of
10	MR. TISI: I have a	10	18.
11	question. I'll use my minute and	11	MS. SHARKO: I really think
12	add a couple minutes to yours.	12	your time is up at this point.
13	MS. MILLER: Wait. I used	13	MS. MILLER: Yeah, your time
14	30 seconds. So you have a minute	14	
15	and 30 seconds.	15	is way up. THE WITNESS: I'm there.
16	MR. TISI: Okay. Well don't	16	MS. MILLER: You've just
17	waste my 30 seconds. I don't	17	
18	think I'll use 30 seconds.	18	gone over two more minutes. MR. TISI: Counsel, you've
19	uniik 111 use 30 seconus.	19	
20	EXAMINATION	20	been wasting my time. I'm going to ask this question. And if you
21	EAAIVIINATION	21	<u> </u>
22	BY MR. TISI:	22	want to you want to walk out,
23	Q. In that section, it	23	that's fine. I'll ask the judge for the time.
24	refers there are four footnotes under	24	BY MR. TISI:
		24	
	Page 567		Page 569
1	the perineal talc section.	1	Q. How many how many
2	Do you see that?	2	references of all these references,
3	A. Yeah, I'm sorry. I thought	3	there are five references. Do you have
4	I was done.	4	any any suggestion that the NCI
5	Q. On on Page 12. Footnote	5	actually did a causation analysis like
6	43 through footnote 46.	6	you or Health Canada or the plaintiffs'
7	Do you see that?	7	experts or anybody else did?
8	A. I see I see Reference 42	8	MS. MILLER: Objection.
9	and I see a reference 43. I don't see	9	THE WITNESS: I don't know.
10	where you see oh, there's 44. Yeah, I	10	I don't know what they did.
11	see I see a bunch of	11	MR. TISI: Thank you very
12	Q. And 46?	12	much.
13	A. 44, 45, 46.	13	THE VIDEOGRAPHER: Stand by,
14	Q. Right. So there are five	14	please. Remove your microphones.
15	references in this paragraph, correct?	15	The time is 5:54 p.m. This
16	A. Yes.	16	completes today's deposition.
17	Q. Okay. And so we can assume,	17	(Excused.)
18	can we not, that those are the references	18	(Deposition concluded at
19	they looked at?	19	approximately 5:54 p.m.)
20	MS. MILLER: Objection.	20	
21	Calls for speculation.	21	
22	THE WITNESS: I don't know	22	
23	if it's all the references that	23	
24	they looked at. I think they are	24	

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Karla Ballman, Ph.D.

	Page 570		Page 572
1		1	
2	CERTIFICATE	_	ERRATA
3 4		2	
5	I HEREBY CERTIFY that the	3	
	witness was duly sworn by me and that the	4	PAGE LINE CHANGE
6	deposition is a true record of the testimony given by the witness.	5	
7	testimony given by the witness.	6	REASON:
	It was requested before	7	
8	completion of the deposition that the	8	REASON:
9	witness, KARLA BALLMAN, Ph.D., have the opportunity to read and sign the	9	
	deposition transcript.	10	REASON:
10		11	
11 12		12	REASON:
12	MICHELLE L. GRAY,	13	
13	A Registered Professional	14	REASON:
14	Reporter, Certified Shorthand Reporter, Certified Realtime	15	
11	Reporter and Notary Public	16	REASON:
15	Dated: March 24, 2019	17	
16		18	REASON:
17 18	(The foregoing certification	19	
19	of this transcript does not apply to any	20	REASON:
20	reproduction of the same by any means,	21	
21 22	unless under the direct control and/or supervision of the certifying reporter.)	22	REASON:
23	supervision of the certifying reporter.)	23	
24		24	REASON:
	Page 571		Page 573
1	INSTRUCTIONS TO WITNESS	1	
2	I WILLES	2	ACKNOWLEDGMENT OF DEPONENT
3	Please read your deposition	3	
4	over carefully and make any necessary	4	I,, do
5	corrections. You should state the reason	5	hereby certify that I have read the
6	in the appropriate space on the errata	6	foregoing pages, 1 - 574, and that the
7	sheet for any corrections that are made.	7	same is a correct transcription of the
8	After doing so, please sign	8	answers given by me to the questions
9	the errata sheet and date it.	9	therein propounded, except for the
10	You are signing same subject	10	corrections or changes in form or
11	to the changes you have noted on the	11	substance, if any, noted in the attached
12	errata sheet, which will be attached to	12 13	Errata Sheet.
13	your deposition.	14	
$\frac{13}{14}$	•	15	
	It is imperative that you	16	KARLA BALLMAN, Ph.D. DATE
15	return the original errata sheet to the	17	IN INC. I DI ILLIAN III, I II.D.
16	deposing attorney within thirty (30) days	18	
17	of receipt of the deposition transcript	19	Subscribed and sworn
18	by you. If you fail to do so, the		to before me this
19	deposition transcript may be deemed to be	20	day of, 20
20	accurate and may be used in court.	21	My commission expires:
21		22	-
22			
23		23	Notary Public
24		24	

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Karla Ballman, Ph.D.

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1		LAWYER'S NOTES		
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Exhibit 5

Invoice

Dr. Karla Ballman

Statistician and Consultant

430 East 63rd Street, Apt. 12G

New York, NY 10065

507-301-3013

kab2053@med.cornell.edu

Please remit payment to Karla Ballman at the address above.

Invoice Date: 03/07/2019

<u>Consulting Services for Johnson and Johnson Talcum Power and ovarian cancer litigation: 11/12/2018-03/07/2019</u>

Consulting Services/Fees

Description	Hours
	5
	55
	80

140

Consulting rate: \$400 per hour

Invoice Total \$56,000



Exhibit 6

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW JERSEY

IN RE: JOHNSON & JOHNSON TALCUM POWDER PRODUCTS MARKETING, SALES PRACTICES AND PRODUCTS LIABILITY LITIGATION

THIS DOCUMENT RELATES TO ALL CASES

MDL NO. 16-2738 (FLW) (LHG)

EXPERT REPORT OF CHRISTIAN MERLO, MD, MPH FOR GENERAL CAUSATION DAUBERT HEARING

Date: February 25, 2019

Christian Merlo, M.D., M.P.H.

Mitian A. Mulo

I. SCOPE OF REPORT

I was asked to address fundamental tenets of epidemiology, to review the epidemiology related to the potential association between perineal talc use and ovarian cancer, to review plaintiffs' epidemiology experts' reports, and to offer my opinions on their methodologies.

All of the opinions in this report are stated to a reasonable degree of scientific certainty.

I am being compensated at a rate of \$530 per hour for record review and drafting my report and \$720 per hour for testimony.

My curriculum vitae, a list of literature that I have reviewed, and a list of testimony I have provided in the last four years may be found in Appendices A, B and C.

II. PROFESSIONAL QUALIFICATIONS

My name is Christian Merlo. I am a licensed physician in the state of Maryland and am board certified in internal medicine, pulmonary medicine and critical care medicine. I am an attending physician at the Johns Hopkins Hospital and the Johns Hopkins Bayview Medical Center and care for patients both in the hospital and in our outpatient centers. I am Associate Professor of Medicine in the Division of Pulmonary and Critical Care Medicine at the Johns Hopkins University School of Medicine, and in addition, I am Associate Professor of Epidemiology in the Department of Epidemiology at the Johns Hopkins Bloomberg School of Public Health. I am also a member of the *Alpha Omega Alpha* honor society for medicine.

I have provided patient care and consultation as a clinical physician and have taught medicine in the fields of general medicine, pulmonary medicine and critical care medicine for more than 18 years.

I received my doctorate in medicine at Georgetown University School of Medicine and completed my residency in internal medicine at Georgetown University Medical Center, where I also served as Chief Resident. I completed a four-year fellowship in Pulmonary and Critical Care Medicine at the Johns Hopkins Hospital, and during this period in time, I also received a master's degree in public health from the Johns Hopkins Bloomberg School of Public Health.

I was offered a faculty position in 2004 as Instructor in Medicine at the Johns Hopkins University School of Medicine, and was promoted to Assistant Professor of Medicine in 2006. In 2009, I was awarded a joint faculty appointment as Assistant Professor of Epidemiology at the Johns Hopkins Bloomberg School of Public Health, and in 2015, I was promoted to Associate Professor of Medicine and Epidemiology.

I am the Associate Program Director of the Adult Cystic Fibrosis Program at the Johns Hopkins Cystic Fibrosis Center, one of the largest cystic fibrosis centers in the country, and in addition, I am the Director of Research for both the Adult Cystic Fibrosis Program and the Lung Transplant Program at the Johns Hopkins Hospital. I am also an Associate Program Director for Research and Scholarship for the Osler Medical Residency

program. I have specific expertise in the clinical care of patients with cystic fibrosis and those who undergo lung transplantation, as well as in the care of patients with other pulmonary diseases or those that require critical care therapies. My research involves the design of clinical studies investigating the impact of environmental and infectious exposures on outcomes for patients with cystic fibrosis and those who undergo lung transplantation.

I am currently principal investigator or co-investigator on many NIH-funded and pharmaceutical industry-sponsored clinical trials. I have authored or co-authored more than 70 manuscripts, book chapters and commentaries on topics involving cystic fibrosis and lung transplantation, as well as on topics in general pulmonary medicine and critical care medicine. As a clinical investigator, I have had rigorous training and have expertise in clinical epidemiology, with specific training in clinical trial design, conduct and analysis. My ties with the School of Public Health have provided ongoing collaboration to help research the epidemiologic nature of the exposure/outcome causal pathway in diseases involving internal medicine, pulmonary medicine and critical care medicine.

I am also an expert in the methodologic approach to the study of disease and have more than 15 years of experience teaching coursework on study design and analysis, as well as conducting research on the epidemiologic nature of the exposure/outcome relationship with a strong command of the strengths and limitations of epidemiologic investigation.

III. FUNDAMENTAL PRINCIPLES OF EPIDEMIOLOGY

Although there are many definitions of epidemiology, a widely accepted definition describes epidemiology as:

the study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.¹

Epidemiology is a scientific discipline that relies heavily on an unbiased approach to the collection, analysis and interpretation of data. Epidemiology places an emphasis on the frequency and rate of health events as well as how personal characteristics such as demographics, socioeconomic status, behaviors and environmental exposures play a role in health-related events. Epidemiology is a science, and epidemiologic studies, when designed, conducted, analyzed and interpreted appropriately, can be powerful tools in the critical examination of the causal pathway between exposure and outcome.

A. Fundamentals Of Epidemiologic Study Design

Researchers often have to choose a study design based on the research question, as not all study designs are appropriate for all questions. Many research questions are suitable to be answered using a classic experimental design such as the randomized controlled trial. For instance, it may be appropriate to use a randomized controlled trial design to investigate

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See, e.g., Centers for Disease Control & Prevention, Principles of Epidemiology in Public Health Practice, Third Edition, An Introduction to Applied Epidemiology and Biostatistics, Lesson 1: Introduction to Epidemiology, https://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section1.html (footnote omitted).

the effect of a new cholesterol lowering agent on mortality in patients with heart disease. An example of this is the Scandinavian Simvastatin Survival Study,² in which researchers studied 4,444 patients with heart disease who were either treated with simvastatin or placebo. The investigators found a significant reduction in the risk of death from heart disease in the simvastatin group compared to placebo.

Other research questions are not suitable for an experimental design in humans because of the potential for harm, lack of equipoise or ethical concerns. One such example is the effect of cigarette smoking on risk of death and risk of death from lung cancer. In order to attempt to answer this, researchers would not be able to use an experimental design, and more likely would have to use an observational study design. Doll and Hill³ sent out a short but detailed questionnaire asking more than 59,000 British physicians about smoking habits and obtained follow-up information regarding mortality and lung cancer risk. In this very large observation cohort, Doll and Hill were able to demonstrate a significant increase in all-cause mortality as well as deaths due to lung cancer among cigarette smokers when compared to non-smokers.

Sometimes, the experimental study design is appropriate, and other times, an observational study design is necessary, but it is only with careful and detailed attention to the study design (study type, study size, exposure assessment, attempt to limit bias and confounding), conduct and analysis that the cause of disease can possibly be determined.

B. Limitations Of Epidemiologic Study Design

All epidemiologic studies have the advantage and limitation of studying humans rather than experimental animals. Each epidemiologic study design (detailed in the **STUDY DESIGN CONSIDERATIONS** section), however, not only has its strengths, but also weaknesses.

For example, consider the design of an epidemiologic study to evaluate the question:

"Does regular aerobic exercise decrease the risk of heart disease?"

A randomized controlled trial, one might think, would be the most rigorous approach and the method most similar to a laboratory scientist working in a highly controlled environment with experimental animals. Suppose researchers choose a group of subjects who don't exercise regularly, divide the group randomly into an intervention group, who are instructed to perform aerobic exercise for 30 minutes three times a week, and a control group, who are instructed to continue with a low exercise lifestyle. The investigators will follow both groups looking for signs of heart disease, and if they are correct, subjects who exercise will get less heart disease. With this study design there may be a problem with controlling how much the subjects exercise. In the laboratory, a scientist can control exactly how much an experimental animal exercises, but in the real world this

The Scandinavian Simvastatin Survival Study Group, Design and baseline results of the Scandinavian Simvastatin Survival Study of patients with stable angina and/or previous myocardial infarction. (1993) 71 Am J Cardiol 393.

Doll & Hill, The mortality of doctors in relation to their smoking habits. (1954) 328 (7455) BMJ. 1529 .

may be difficult to control. The intervention group may become lazy and not exercise, while the control group might have concern about heart disease and increase exercise, which would affect the study results.

The researchers might attempt a cohort study and follow a large group of people without heart disease over a period of time and ask them detailed questions about exercise and then after several years compare the rate of heart disease among those who exercise regularly to those who do not. Again, if the researchers are correct, patients who exercise regularly will develop less heart disease. One potential problem with this design is that people who exercise regularly may differ in other ways from people who do not exercise regularly. For example, the people who exercise regularly might be more likely to eat healthier and less likely to smoke and have a reduced risk of heart disease that is unrelated to exercise.

The researchers might also choose to perform a case-control study and identify a group of people with heart disease from the hospital coronary care unit as well as a comparable group from the hospital without heart disease. The investigators would then question both groups about their exercise over the past several years and classify each as either exercising regularly or not exercising regularly. Once again, if the researchers are correct, the patients with heart disease will report less exercise than controls. One potential problem with this approach is that people may not be able to remember their exercise patterns, or those with heart disease might feel self-conscious about reporting true exercise patterns and the information obtained about the exposure may not be reliable.

IV. EVALUATING THE ACCURACY OF EPIDEMIOLOGIC STUDIES

A. Accuracy Of An Epidemiologic Study

In an ideal setting, all epidemiologic studies would be designed, conducted, analyzed, and interpreted in a fashion that eliminated sources of error. One of the major goals for epidemiologists is to minimize error as much as possible. Similarly, it is important for those who read and use the epidemiologic literature to be cautious in how the information is interpreted. As such, it is important to understand the factors that can influence the accuracy of epidemiologic study as errors can arise from three main sources – bias, confounding and random error.

Accuracy requires both validity and precision. Bias and confounding affect the validity of a study, while random error affects the precision of a study.

B. Validity

Validity of epidemiologic studies is defined as the "degree to which inferences are warranted given the methods and study population chosen." There are two major types of validity – internal validity and external validity. Internal validity represents how well the study findings, aside from random error, represent the truth in the population being studied. The internal validity of an epidemiologic study can be challenged by systematic error caused by either or both of bias and confounding. This systematic error in the study design, conduct, analysis or interpretation can lead to either artificial elevation or artificial

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⁴ Oleckno, *Epidemiology: Concepts & Methods* (2008).

reduction in the measures of association between exposure and outcome. External validity, sometimes referred to as generalizability, is the extent to which the results of the study can be applied to populations other than the population under investigation. It is often felt that internal validity is more important than external validity because if a study is not valid, then why would one generalize a non-internally-valid study to another population. The abovementioned Scandinavian Simvastatin Survival Study⁵ results were believed to be internally valid, and it was also felt to be reasonable to apply these results to other populations.⁶

C. Bias

Bias is a type of systematic non-random error in the design and/or conduct of an epidemiologic study. Bias can have a dramatic effect on the internal validity of a study and because of this, can affect the accuracy of the study. In general, bias can be broken down into two main categories, known as selection bias and information bias. Both of these types of bias can lead to either an overestimation or underestimation of risk in epidemiologic studies. Although bias can be present in all types of studies, bias can be a particularly significant concern in observational studies, especially in those studies that are poorly designed.

Selection bias refers to a systematic error due to the way in which subjects are selected for the study. This type of bias can occur when the subjects in the study population differ from the subjects in the source population. This can occur in a cross-sectional or case-control study when the frequency of the exposure or outcome differs systematically between the study population and the source population. Because of this, selection bias can sometimes lead to an association when one does not actually exist. For instance, an investigator interested in researching whether coffee drinking is associated with a specific type of cancer designs a case-control study and obtains cases from an oncology clinic. The investigator obtains controls from a nearby heartburn clinic. The study is performed, and the investigator finds that coffee drinkers are 1.5 times more likely to develop a specific type of cancer. Since controls are recruited from a different clinic than the cases, it is possible that controls may be systematically different from cases in a way that may affect the study results. In fact, since controls were recruited from a nearby heartburn clinic where patients are routinely instructed to reduce or stop coffee drinking, controls are less likely to be coffee drinkers than all people who would be eligible controls and lead to an overestimate of risk due to selection bias.

Information bias refers to a systematic error due to measurement errors that leads to misclassification of study subjects with regards to either exposure or outcome. Information bias tends to occur during the data collection portion of an epidemiologic study. This misclassification of either exposure or outcome can be characterized as either differential or nondifferential. Differential misclassification can occur when the likelihood of misclassification is different between the study and comparison groups. Differential misclassification may lead to either overestimation or underestimation of the true value of the measure of association. If the cases in a case-control study are more likely to be

The Scandinavian Simvastatin Survival Study Group. *Design and baseline results of the Scandinavian Simvastatin Survival Study of patients with stable angina and/or previous myocardial infarction.* (1993) 71 Am J Cardiol 393.

⁶ Id.

misclassified as exposed than the controls, then the study will tend to overestimate the true estimate of risk (odds ratio).

For example, suppose an investigator is interested in studying whether high blood pressure is associated with drinking sugary drinks. A case-control study is designed, and the investigator finds 200 cases with high blood pressure and 200 controls with normal blood pressure. The investigator then asks questions about sugary drink habits during the previous five years. The responses are collected and analyzed (table a), and there is a statistically significant increase in risk of high blood pressure with drinking sugary drinks (OR: 3.67; p<0.001), suggesting sugary drinks are associated with high blood pressure. If cases are systematically more likely to report sugary drink usage than controls (differential misclassification because of the belief that sugary drinks may cause high blood pressure), then this will lead to an overestimation of the true estimate of risk. In reality, if there was no increase (table b) in reporting sugary drink consumption among cases (no misclassification), there would be a non-statistically significant estimate of risk (OR: 1.35; p=0.13).

a.

	Study			
	High BP	No high BP		
Sugary drinks	150	90	OR=3.67	P<0.001
No sugary drinks	50	110		
	200	200		

b.

	Truth			
	High BP	No high BP		
Sugary drinks	105	90	OR=1.35	P=0.13
No sugary drinks	95	110		
	200	200		

Nondifferential misclassification can occur when there is likely an equal proportion of misclassification of exposure status among those with and without an outcome or of outcome status among those with and without an exposure. This type of misclassification typically results in a dilution of the effect of exposure on outcome and is more likely to result in no association when an association between exposure and outcome actually exists.

One specific type of bias that leads to misclassification and that is common in case-control studies is known as recall bias. It often results from the fact that cases tend to remember past exposures more than controls. It may also arise if cases are more likely than controls to investigate whether certain risk factors increase the risk of developing a certain disease. Recall bias is often less likely to occur when both cases and controls are patients, for example, in hospitalized patients, where the degree of thinking about a possible exposure or outcome is likely to be at similar levels. Consider again the above example of the investigator who is trying to determine if there is a relationship between sugary drinks and high blood pressure. If the cases tend to recall and report more sugary drink consumption simply because they have reflected more on their past experiences, recall bias

Schultz & Grimes, *Case-control studies: research in reverse*. (2002) 359(9304) Lancet 431; Schlesselman, *Case-control studies: design, conduct, analysis* (1982).

could result in an overestimation of the measure of risk between the sugary drinks and high blood pressure.

As particularly pertinent here, in one case-control study involving the potential association between perineal talc use and ovarian cancer, the investigators examined whether cases and controls reported talc use more frequently if they were interviewed after 2014, which is the year when two widely publicized lawsuits concerning talc use were filed, as opposed to before that year. For those interviewed prior to 2014, approximately the same percentage of cases and controls reported genital talc use (36.5% for cases, 34.0% for controls). For those interviewed after 2014, cases reported talc use 51.5% of the time, while the percentage of controls reporting talc use remained about the same (34.4%). This is a clear demonstration of the effect of recall bias in case-control studies. Critically, that study found a statistically significant risk of ovarian cancer for those who were interviewed after 2014 at 2.91 (95% CI: 1.70-4.97). For those interviewed prior to 2014, no statistically significant association was found. As discussed in Section VIII.B below, such concerns of recall bias could have affected pre-2014 studies as well.

Selection and information bias can best be controlled and prevented during the design and conduct of a study. This means that investigators must recognize the potential sources of bias and take precautions to minimize this bias. Methods have been developed to prevent or minimize bias in epidemiologic studies. Some of these include attempts to standardize data collection, pilot test data collection instruments, use objective methods to measure exposure and outcome status, verify subject response from other sources and obtain multiple measurements of exposure and outcome status.

D. Confounding

In epidemiology, confounding is a misrepresentation of the true effect of an exposure on an outcome due to an association between the exposure and another factor. This factor is often referred to as a confounder, and like bias, confounding is a systematic, non-random error that can affect the internal validity of a study. Confounding can result in an overestimation or underestimation of the true effect of an exposure on an outcome. In general, for another factor to confound the effect of an exposure on the outcome, three conditions must be met: (1) the factor must be associated with the exposure; (2) the factor must be associated with the outcome; and (3) the factor must not represent a step in the causal pathway between exposure and outcome. Many times, epidemiologists do not know what extra factors will confound an actual effect of an exposure on an outcome, but it is important for suspected factors to be considered as potential confounders. Experienced epidemiologists are usually able to anticipate suspected confounders given previous experience in similar studies or based on previous studies looking at a similar exposure outcome relationship.

The Sister Study, which I discuss in more detail below, is one example of potential confounding affecting the measurement of the effect of genital talc exposure. ¹⁰ In that

Schildkraut et al., Association between Body Powder Use and Ovarian Cancer: The African American Caner Epidemiology Study (AACES). (2016) 25(10) Cancer Epidemiol Biomarkers Prev. 1411.

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¹⁰ Gonzalez et al., Douching, Talc Use, and Risk of Ovarian Cancer. (2016) 27 Epidemiology 797.

study, in addition to talc use, participants were also asked about their douching habits. Of the 50,884 women who completed questionnaires, 154 women developed ovarian cancer. Ever douching during the 12 months prior to the study was associated with a statistically significant risk of ovarian cancer (HR: 1.8; 95% CI: 1.2-2.8) when compared with never douching after adjusting for confounders. In contrast, there was no statistically significant increase risk of ovarian cancer (HR: 0.73; 95% CI: 0.44-1.2) with ever talc use during the 12 months prior to the study when compared with never talc use after adjusting for confounders. There was no change in the estimated effect of talc use after adjustment for douching, and similarly, there was no change in the estimated effect of douching after adjusting for talc use. If those who use talc are more likely to douche, as is demonstrated in this and other studies, and douching has a significant effect on the risk of ovarian cancer in this study, prior studies that have revealed a significant effect of talc on ovarian cancer may have been confounded by douching.

Although the amount of confounding is the degree to which the measure of association is affected, it is not appropriate to evaluate confounding using statistical tests of significance. In order to ensure the validity of an epidemiologic study, all attempts should be made to control confounding. While bias usually occurs in the study design and data collection phases of an epidemiologic study, confounding usually occurs during the design and analysis phases. Epidemiologists can work to control confounding in the design phase by restricting subjects to only certain characteristics, matching to attempt to create study and comparison groups that are similar with respect to potential confounders, and randomization to decrease confounding by increasing the likelihood that the study group is similar to the comparison group with regard to known factors, as well as unknown potential confounders.

E. Precision

Precision is a measure of the amount of nonsystematic or random error that is present in the study. Random error is variability in a measure that is simply due to chance, and it represents unexplained error in a study. In epidemiologic studies, a precise result would be very easily replicated. Random errors tend to cause inconsistency between different studies and may make it less likely that investigators will find an association between exposure and outcome.

F. Random Error

Random error affects the precision (and thus, the accuracy) of an epidemiologic study. Measurement error and sampling variation are the two main components of random error. Measurement error occurs because of an error in the measuring of the value of a variable. This may be the result of inaccurate measuring devices or due to the subjective type of some exposures or outcomes. Measurement error can be minimized by taking multiple measurements for a certain exposure or outcome. For instance, assume the above case-control study designed to investigate the effect of sugary drinks on blood pressure.

¹¹ *Id*.

¹² *Id.*

Rosenblatt et al., *Characteristics of women who use perineal powders*. (1998) 92(5) Obstet Gynecol 753.

Investigators might consider taking several measures of blood pressure and using the average to minimize measurement error. A second form of random error, sampling variation, can occur because samples used in an epidemiologic study are only estimates of the desired population of interest to study. Consider again the above case-control study in which investigators report the odds ratio of 1.35 as the risk estimate of the effect of sugary drinks on high blood pressure. Suppose the investigators replicated the study using a new sample of the same size and found that the odds ratio was now 1.8. Assuming systematic errors were controlled for in study design, data collection and analysis, this difference can be explained by random error/sampling variation. A third sample might reveal an odds ratio of 1.1 or 2.5, which demonstrates that sampling variation is both unpredictable and not reproducible. In general, epidemiologists try to reduce sampling variation by increasing sample size. The stronger the relationship between the exposure and outcome, the smaller the group of patients that need to be studied for this relationship to be apparent. If the group being studied is too small, then the causal relationship may be missed, or spurious results may show up by sampling variation and random error.

V. STUDY DESIGN CONSIDERATIONS

The purpose of epidemiology is to establish associations between exposures and outcomes that may uncover clues to causation. Epidemiologists can explore the relationship between exposure and outcome in humans in real-world situations by observing (observational study designs) or intervening to a limited extent (experimental study designs), as opposed to controlling all aspects of an experiment in the laboratory. Epidemiologists may also gather data from many studies, either observational or experimental (meta-analysis study designs) and summarize the information in an attempt to demonstrate associations between exposure and outcome. As such, there are many different study designs in epidemiologic research in humans, each with strengths and weaknesses.

A. Case Reports And Case Series

Individual level observations can be documented in a case report, a particular clinical situation involving one unique patient, or in a case series, a description of a group of patients with similar clinical findings or conditions. Case reports and case series are helpful tools in generating hypotheses about associations between exposures and outcomes. However, the lack of a comparison group and the likely presence of bias and confounding limit validity, and therefore limit the ability of these types of epidemiologic descriptions to establish causal associations between exposure and outcome.

B. Cross-Sectional Studies

A common epidemiologic study design used in the initial attempts to evaluate associations between exposures and outcomes is the cross-sectional study. In this type of study, both the exposure and outcome are evaluated simultaneously in each study participant. This approach is sometimes referred to as a prevalence study, as cases of disease or outcome identified are prevalent cases of the outcome being investigated. It is impossible to determine the temporality between exposure and outcome with this epidemiologic study design because of the temporal bias that may exist if the disease causes the exposure. For instance, prevalent cases of asthma may be less likely to own a cat than those without asthma. As patients with asthma may have been instructed to not own a cat,

this relationship might lead investigators to conclude that cat ownership is protective against asthma, leading to a phenomenon known as reverse causality. In addition to temporal bias, selection bias due to survivorship may also be present in cross-sectional studies. This may result if exposure in cases leads to shortened survival than those cases who are unexposed. Similar to case-reports and case-series, cross-sectional studies are often used to generate hypotheses about potential causal associations between exposure and outcome.

C. Case-Control Studies

Another common study design used to evaluate the effect of an exposure on an outcome is known as a case-control study. In this type of epidemiologic study, cases are defined as those with a particular outcome and non-cases or controls are defined as those without a certain outcome. Exposure is then retrospectively evaluated and compared between the cases and controls. Thus, in a case-control study, the prevalence of the exposure of interest should be higher among those with the outcome (cases) than those without the outcome (controls). In general, case-control studies provide more information on the temporal relationship between exposure and outcome than cross-sectional studies. However, case-control studies remain susceptible to other forms of bias. Selection bias can occur in a case-control study when the relationship between exposure and outcome differs systematically between the study population and the source population. Because of this, selection bias can sometimes lead to an association when one does not actually exist. Recall bias is common in case-control studies and results from the cases or subjects with disease having a tendency to remember past exposures more than controls. As mentioned above, it may also arise if cases are more likely to investigate possible factors that may increase the risk of developing a certain disease. Recall bias is often less likely to occur when both cases and controls are patients, for example, in hospitalized patients 14 as compared to population-based case-control studies where the degree of thinking about a possible exposure or outcome is likely to be at similar levels.

D. Cohort Studies

A cohort design assigns an individual as either exposed or unexposed and then that individual is followed over time to see if a particular outcome of interest develops. In general, there are two main types of cohort studies – prospective and retrospective. A prospective cohort design establishes exposure status in the beginning of a study and potentially repeatedly during the study, and then the outcome status for each individual is determined during a follow-up period that extends into the future. In a retrospective cohort design, the exposure and outcome have already occurred (as in the use of administrative or registry data), and the exposure status of each individual is determined from a time period that existed in the past with the outcome then being determined during a time period after exposure that may extend to the present. Temporality is established whether a cohort study is prospective or retrospective in design because the exposure status is always determined prior to evaluating outcome status. In general, cohort studies provide more evidence for a causal relationship between exposure and outcome, and can often study many exposure-outcome relationships with less chance for bias and confounding than case-control studies if

Oleckno (2008) at 207; Infante-Rivard, *Hospital or Population Controls for Case-Control Studies of Sever Childhood Diseases*? (2003) 157(2) Am J Epidemiol 176.

the design, conduct, data collection and analysis are properly performed. However, cohort study designs also remain susceptible to certain types of bias and confounding, are often very expensive, take a long time to conduct and may be difficult to perform, especially if the outcome of interest is rare.

E. Experimental Studies

Unlike an observational study, where exposure is not under the control of the investigator, an experimental study is one in which the exposure (intervention) is controlled directly by the investigator. One such experimental study design – the randomized-controlled clinical trial – is a planned epidemiologic experiment where subjects are randomly assigned to an exposure (intervention) or control group to evaluate the effect of the exposure on outcome. Randomized controlled clinical trials are considered the gold standard of epidemiologic studies. Although there are many advantages to an experimental study design, experimental studies are still subject to the effects of bias and confounding if not designed and conducted properly, and there are instances when this design is not suitable to evaluate the causal association between exposure and outcome because of potential for harm, lack of equipoise or ethical concerns.

F. Meta-Analysis

Epidemiologists may use multiple studies that address the same research question to provide an overall statistical summary of the results. This process is known as metaanalysis and is useful when individual studies tend to be inconclusive because of small sample size. A meta-analysis can provide a precise estimate of the effect of an exposure on an outcome of interest by combining the results of relevant studies by using a systematic approach and analysis. Meta-analyses can also help to provide consensus about the effectiveness of interventions, as well as insight or explanation for differences in individual trial results. Meta-analysis is a type of systematic review that utilizes a comprehensive, rigorous and standardized approach to selecting, assessing and synthesizing all relevant studies on a given topic. Systematic reviews that summarize studies without combining the results statistically are often called qualitative systematic reviews, while those that also combine study results statistically to produce an overall summary effect are referred to as quantitative systematic reviews, and are synonymous with meta-analyses. There are fundamental steps that must be followed to ensure the quality of a meta-analysis. These include (a) defining the research question, (b) defining the criteria for study selection, (c) structuring a review of the literature for all eligible studies, (d) structuring data abstraction, (e) reviewing the methods and results of each study critically, (f) summarizing the results of each study using a standard format, (g) using proper statistical tests to provide a summary effect, (h) assessing variation (heterogeneity) between studies and (i) reviewing, interpreting and reporting the findings.¹⁵

The idea of a meta-analysis is to combine the results of individual studies so that a summary point estimate can be reached that describes the strength of association between exposure and outcome. There are different approaches to modelling data between studies, and it is important to understand that these approaches may produce different results. Fixed-effects models assume that the effect of exposure on outcome is equal in all studies

¹⁵ Oleckno (2008).

included in the meta-analysis, while random-effects models assume that the effect of exposure on outcome varies between each included study due to both actual differences in effect and random error. In general, when the findings of the included studies are similar, both models yield similar summary estimates, but when the findings of the included studies vary appreciably, the models may produce conflicting results. A statistical test of heterogeneity is oftentimes performed to evaluate whether differing results from the included studies are due to chance alone. If unlikely due to chance, then a random effects model may be more appropriate.

It is also important to understand that in addition to the great deal of preparation and structured organization that is involved in conducting a meta-analysis, it is of utmost importance to vigilantly examine the accuracy of the included individual studies when relying on meta-analyses. Many of plaintiffs' epidemiologists, for instance, premise their causation opinions in large part on the various meta-analyses assessing the effect of exposure to talc on ovarian cancer. But, when it comes to concerns over bias and confounding, a pooled analysis or a meta-analysis will only be as good as the included studies. And while some of plaintiffs' experts have performed their own meta-analyses, the underlying limitations of the included studies are not lessened or removed simply by performing additional meta-analyses using the same studies with different groupings.

VI. EPIDEMIOLOGIC STUDIES OF TALC POWDER AND OVARIAN CANCER

In order to understand the relationship between talc exposure and ovarian cancer, I have performed a search of the peer-reviewed literature. I identified 44 individual studies investigating the exposure/outcome relationship between talcum powder use and ovarian cancer. The individual studies were evaluated with attention to study design, accuracy, exposure assessment, analysis and validity, while noting both strengths and weaknesses.

A. Summary Of Article Study Designs

Due to the exposure (talc powder) and outcome (ovarian cancer) being studied, there were no experimental studies, as this study design would not be suitable to evaluate this relationship. The studies identified can be separated into three categories: (1) case-control studies, (2) cohort studies, and (3) meta-analyses. I reviewed 33 case-control studies (two of which pooled data from different studies), four cohort studies, and seven meta-analyses published between 1982 and 2018.¹⁷

The 33 case-control studies ranged in size from 123 to 4,092 participants. There were seven hospital-based case-control studies and 26 population-based case-control studies that I reviewed. The assessment of exposure varied extensively in the case-control studies and was obtained from responses to questionnaires on the use of talc, diaphragm with talc, diaphragm storage only, all over body talc, genital talc, legs only talc, not genital talc, talcum powder in the perineum, talcum powder on sanitary pads, talcum powder on

¹⁶ Clarke-Pearson Rep. 7; McTiernan Report 8, 63; Moorman Rep. 10.

I also briefly reviewed the unpublished Taher meta-analysis cited by several of plaintiffs' experts, and it does not affect my analysis. The association it reports is not materially higher than prior studies, and it agrees with IARC's assessment that a causal relationship is merely "possible" in light of current evidence.

diaphragms, after bathing only, baby powder only, deodorizing powder, dusting powder to the perineum, any dusting powder, talc around the abdomen/ perineum, perineal dusting, genital powder application, genital/rectal talc, powder to genitals, powder to diaphragm, or powder to sanitary napkins. All studies included pathologically confirmed cases or cancer registry cases of ovarian cancer. Analyses varied widely among the case-control studies from no adjustment for potential confounders to adjusting for varying degrees of confounding, including age at first birth, age at last birth, age at menarche, age at menopause, tumor behavior, breast feeding, community-based case-control study, diaphragm use, duration of use, exercise, education, frequency of use, family history of breast and ovarian cancer, histologic type, hospital-based case-control study, hair dye use, hormone replacement therapy, hysterectomy, income, use of medications, menopausal status, sanitary napkin use, number of pregnancies, oral contraceptive use, parity, socioeconomic status, timing of use and tubal ligation.

The four cohort studies I reviewed utilized data from the US Nurses' Health Study (NHS), US Nurses' Health Study II, the Women's Health Initiative Observational Study, and the Sister Study and ranged in size from 41,654 to 108,870 participants. The assessment of exposure was obtained from responses to questionnaires on talc use, talc on the perineum or napkin, powder on the genitals, powder on diaphragm, powder on napkin or talc use in the past 12 months. Analyses varied across the different cohort studies with varying degrees of adjustment for potential confounding, including age, age at last birth, menopause status, age at menopause, race, parity, BMI, activity level, breast feeding, oral contraceptive use, duration of oral contraceptive use, estrogen use, postmenopausal hormone use, duration of hormone replacement therapy, tubal ligation, smoking status and family history of breast or ovarian cancer.

B. Case-Control Studies: Hospital-Based

I identified seven hospital-based case-control studies that have evaluated the potential causative association between talc and ovarian cancer, yielding similar non-statistically significant estimates of risk of ovarian cancer and talc usage.

In 1983, Hartge et al. ¹⁸ conducted a hospital-based case-control study of pathologically identified ovarian cancer and frequency matched controls of women in the same hospitals in Washington, DC. Interviews were performed and exposures were categorized as "any" use of talc and "genital" exposure to talc. Among women exposed to "any" talc, the odds ratio of ovarian cancer was not statistically significant at 0.7 (95% CI: 0.4-1.1). Among those who reported talc use on genitals, sanitary napkin or underwear, the odds ratio was not statistically significant at 2.5 (95% CI: 0.7-10.0). The study is limited by small sample size and lack of adjustment for potential confounders.

In 1988, Whittemore et al.¹⁹ similarly completed a hospital-based case-control study of histologically confirmed ovarian cancer cases in pre-menopausal and postmenopausal women between the ages of 18 and 74 with primary epithelial ovarian cancer in Santa Clara County hospitals or at the University of California, San Francisco Medical Center and

Hartge et al., *Talc and Ovarian Cancer*, (1983) 250 J. Am. Med. Ass'n 1844.

Whittemore et. al., *Personal And Environmental Characteristics Related To Epithelial Ovarian Cancer*, (1988) 128 Am J. Epidemiol 1228.

hospitalized controls. In-person interviews were performed, and to evaluate exposure, subjects were asked about whether they had used talcum powder products on the perineum, sanitary pads and/or diaphragms. Participants who responded were asked about frequency and duration of use. Among women who reported perineum only talc use, the odds ratio was not statistically significant at 1.45 (95% CI: 0.81-2.60) after adjustment for parity and oral contraceptive use. There was no trend in increasing duration of treatment, and the risk of ovarian cancer was not statistically significant with increasing frequency of use.

Booth et al.²⁰ in 1989 performed a hospital-based case-control study of pathologically identified ovarian cancer in women under 65 years of age from 13 hospitals in London and two in Oxford and hospitalized controls. Subjects were interviewed and exposure was obtained through a questionnaire and frequency of talc use was reported as never, rarely, monthly, weekly or daily talc use. There was no statistically significant increase in risk of ovarian cancer between never and daily reported talc use (OR: 1.3; 95% CI: 0.8-1.9) after adjusting for age and social class. There was no trend of increased risk of ovarian cancer with increased frequency of reported talc use, as those participants who reported weekly use had a higher risk estimate (OR: 2.0; 95% CI: 1.3-3.4) than those who reported daily talc use, and no dose-response relationship with frequency of reported talc use was found among those exposed compared to those unexposed after adjusting for age and social class.

Rosenblatt et al.²¹ in 1992 reported a hospital-based case-control study evaluating "fiber exposure" generally (with "fiber" defined as asbestos, talc or fiberglass), including "genital fiber use" specifically, which included an assessment of "method of application" in pathologically confirmed cases of ovarian cancer and hospitalized controls between 1981 and 1985 at the Johns Hopkins Hospital. A questionnaire was administered to participants, both by telephone and in the hospital, which was used to obtain reported exposure to talc and presence and length of applying talcum powder to the genital area. There was no statistically significant increase in risk of ovarian cancer with "genital fiber use" (OR: 1.0; 95% CI: 0.2-4.0) after adjustment for parity, or for exposures from diaphragm use with powder (OR: 3.0; 95% CI: 0.8-10.8) after adjustment for parity and education, or genital bath talc exposure (OR: 1.7; 95% CI: 0.7-3.9) in unadjusted analysis. There was also no statistically significant increase in the risk of ovarian cancer with length of exposure (37.4 years vs. <37.4 years) to "genital fiber use" (OR: 2.4; 95% CI: 1.0-5.8) after adjustment for religion.

Tzonou et al.²² in 1993 conducted a case-control study among hospitalized patients from two hospitals in Athens, Greece with histologically confirmed ovarian cancer and hospital visitor controls. In-hospital questionnaires were administered and exposure was obtained as reported use of talc in the perineal region. Even though the prevalence of talc usage was low, there was no statistically significant association between reported exposure of talc to the perineum and risk of ovarian cancer (OR: 1.05; 95% CI: 0.28-3.98). The

Booth et al., Risk factors for ovarian cancer: a case-control study. (1989) 60(4) *Br J Cancer*. 592.

Rosenblatt et al., *Mineral Fiber Exposure and the Development of Ovarian Cancer*, (1992) 45 Gynecologic Oncology 20.

Tzonou et al., *Hair dyes, analgesics, tranquilizers and perineal talc application as risk factors for ovarian cancer.* (1993) 55(3) Int J Cancer. 408.

authors adjusted for age, years of schooling, weight before onset of the disease, age at menarche, menopausal status, age at menopause, parity, age at first birth, tobacco smoking, consumption of alcoholic beverages, consumption of coffee, hair dyeing and analgesics-tranquilizers/hypnotics.

Hartge and Stewart²³ in 1994 reported a case-control study of women diagnosed with pathologically confirmed ovarian cancer in the Washington, DC area between 1978 and 1981. This study analyzed occupational history in women who were diagnosed with ovarian cancer and hospital-based controls. Trained interviewers used a standardized questionnaire that included lifetime job history and exposure to talc on the job. An industrial hygienist conducted an industrial hygiene exposure assessment evaluating each job/industry combination for potential exposure to talc, as well as other potential exposures. The risk of ovarian cancer was not significantly increased for any exposure to talc, regardless of the duration of exposure: <5 years (OR: 0.5; 95% CI: 0.1-1.4), 5-9 years (OR: 0.3; 95% CI: 0.1-1.4), 10+ years (OR: 0.5; 95% CI: 0.2-1.5).

Wong et al.²⁴ in 1999 reported the results of a hospital-based case-control study in patients with ovarian cancer as determined by the Roswell Park Tumor Registry and hospital-based controls. Exposure was evaluated using a self-administered questionnaire regarding medical history and personal hygiene. There was no statistically significant increased risk of ovarian cancer among participants who ever used talc (OR: 1.13; 95% CI: 0.88-1.44)²⁵ or among those who used talc on both a sanitary napkin and on the genital or thigh area (OR: 1.1; 95% CI: 0.7-1.7). There was a haphazard non-statistically-significant relationship with duration of talc use over time and risk of ovarian cancer: 1-9 years (OR: 0.9; 95% CI: 0.6-1.5), 10-19 years (OR: 1.4; 95% CI: 0.9-2.2), and 20 years (OR: 0.9; 95% CI: 0.6-1.2) after adjustment for parity, oral contraceptive use, smoking history, family history of epithelial ovarian cancer, age at menarche, menopausal status, income, education, geographic location and history of tubal ligation or hysterectomy.

C. Case-Control Studies: Population-Based

I identified 26 population-based case-control studies (two from pooled data) that assessed the potential causative association between talc and ovarian cancer, yielding conflicting results.

Cramer et al.²⁶ in 1982 reported the first epidemiologic case-control study of genital talc use and risk of ovarian cancer. Cases were women diagnosed with ovarian cancer in the Greater Boston area between 1978 and 1981 and identified through pathology logs or tumor boards and confirmed pathologically. Controls were identified through annual

Hartge & Stewart., Occupation and ovarian cancer: a case-control study in the Washington, DC, metropolitan area, 1978-1981. (1994) 36(8) J Occup Med. 924.

Wong et al. *Perineal talc exposure and subsequent epithelial ovarian cancer: a case-control study.* (1999) 93 Obstet Gynecol 372.

The Wong paper does not report an odds ratio for ever versus never talc use, but the text of the article contains the information necessary to calculate it. Specifically, the text reports that 221 cases out of 421 total had ever used talc and 311 controls out of 693 total had ever used talc. The calculated odds ratio is 1.13 with a 95% CI of 0.88-1.44 (STATA SE 15.1, StataCorp, College Station, TX).

²⁶ Cramer et al., Ovarian cancer and talc: a case-control study. (1982) 50(2) Cancer 372.

listings of Massachusetts residents and were matched by residence, race and age. Subjects were interviewed in person to evaluate potential exposure to talc through contraceptives, hygiene or surgery. After adjustment for parity and menopausal status, a statistically significant association was found between "any perineal exposure" of talc and risk of ovarian cancer (OR: 1.92; 95% CI: 1.27-2.89).

Harlow and Weiss²⁷ in 1989 conducted a study of perineal use of powder and the risk of borderline ovarian cancer. Caucasian women aged 20-79 from three counties in Washington State diagnosed as having serous or mucinous borderline ovarian tumor were identified using the Seattle-Puget Sound Cancer Surveillance System during the years 1980 to 1985. Independent pathologic review was performed on 73% of cases. A control group was identified through random digit dialing. Reproductive, sexual and medical history, as well as information on talc exposure, was obtained during an in-person interview. There was no statistically significant increase in risk of borderline ovarian tumors with any perineal exposure to powder (OR: 1.1; 95% CI: 0.7-2.1), baby powder use (OR: 0.8; 95% CI: 0.4-1.9), or unspecified talc use (OR: 1.0; 95% CI: 0.4-2.4) after adjusting for age, parity and use of oral contraceptives. Use of deodorizing powder alone (OR: 3.5; 95% CI: 1.2-28.7) and use of deodorant powder alone or in combined use with another powder (OR: 2.8; 95% CI: 1.1-11.7) were both associated with a statistically significant increase in risk of borderline ovarian tumors after adjusting for age, parity and use of oral contraceptives.

Harlow et al.²⁸ in 1992 reported a case-control study among women 18 to 76 years of age diagnosed with borderline or malignant epithelial ovarian cancer confirmed pathologically from 10 hospitals in the Boston metropolitan area. Controls were selected from the Massachusetts Town Books. An in-person interview was performed to obtain demographic, occupational and medical history, as well as hygienic practices. Exposure was reported as any genital talc, type of application (sanitary napkin, underwear, partner or application to diaphragm, or dusting powder to the perineum) and brand of application (brand or generic baby powder or deodorizing or other scented powders). Application via dusting to the perineum was associated with a statistically significant risk of ovarian cancer (OR: 1.7; 95% CI: 1.1-2.7) after adjusting for parity, education, marital status, religion, use of sanitary napkins, douching, age and weight. Use of any genital talc was not associated with a statically significant increase in risk of ovarian cancer (OR: 1.5; 95% CI: 1.0-2.1) after adjusting for the same potential confounders. Although there was no statistically significant increase in risk of ovarian cancer with increasing lifetime total applications of talc-containing powders after adjusting for the same potential confounders, there was a statistically significant increase in the risk of ovarian cancer with more than 10,000 total lifetime perineal applications of talc-containing powders in participants with hysterectomy, tubal ligation and use during nonovulatory months (OR: 2.8; 95% CI: 1.4-5.4).

Chen et al.²⁹ in 1992 conducted a case-control study in China in women with pathologically confirmed cases of epithelial ovarian cancer. Controls were identified from

Harlow & Weiss, A case-control study of borderline ovarian tumors: the influence of perineal exposure to talc. (1989) 130(2) Am J Epidemiol. 390.

Harlow et al., *Perineal exposure to talc and ovarian cancer risk.* (1992) 80(1) Obstet Gynecol. 19.

Chen et al., *Risk factors for epithelial ovarian cancer in Beijing, China*. (1992) 21(1) Int J Epidemiol. 23.

the community using a random selection from a neighborhood committee or village. A questionnaire was developed and administered through face-to-face interviews by trained interviewers. There was no statistically significant association with using dusting powder to the lower abdomen and perineum and risk of ovarian cancer (OR: 3.9; 95% CI: 0.9-10.6) after adjusting for education and parity.

Cramer and Xu³⁰ in 1995 reported on a case-control study of women in the Greater Boston area diagnosed with ovarian cancer. The study combined women diagnosed with ovarian cancer from area hospitals between 1984 and 1987 and confirmed pathologically with a previous study of women diagnosed between 1978 and 1981. Controls were selected from the general population and matched by age and residence. In an unadjusted analysis, talc use was associated with an increase in risk of ovarian cancer (OR: 1.6; 95% CI: 1.2-2.1).

In 1995, Purdie et al.³¹ conducted a case-control study in three Australian states of women diagnosed with ovarian cancer that was confirmed pathologically. Controls were drawn at random from the electoral roll and stratified by age and geographic region. Trained interviewers administered a questionnaire in a face-to-face interview, which included questions about marital status, education, ethnicity, height, weight, smoking history, occupation, medical history and history of talc use. Talc use around the abdomen/perineum was associated with an increased risk of ovarian cancer (OR 1.27; 95% CI: 1.04-1.54) after adjusting for parity.

Green et al.³² in 1997 performed a case-control study using the study population from the Purdie study. Methods for case and control identification were similar to the Purdie study. Ever douching was associated with a non-significant 60% increase in risk of ovarian cancer. Use of talc in the perineal region was associated with an increased risk of ovarian cancer (OR: 1.3; 95% CI: 1.1-1.6) after adjustment for parity, oral contraceptive use, age, education, body mass index, smoking and family history of ovarian cancer. Even though there was a reported 60% increase in risk of ovarian cancer for those who everdouched, there were no adjustments in multivariable analyses for douching as a potential confounder.

Shushan et al.³³ in 1996 conducted a case-control study of women aged 36 to 64 years with histologically diagnosed primary invasive or borderline epithelial ovarian cancer. Cases were identified through the Israel Cancer Registry. Controls were identified by telephoning randomly selected numbers within the same area codes as the cases. Cases and controls were interviewed using a questionnaire containing details on medical history and exposures. Exposure to talc was recorded as never-seldom and moderate-a lot talc use. A

Cramer & Xu, *Epidemiologic evidence for uterine growth factors in the pathogenesis of ovarian cancer.* (1995) 5 Ann Epidemiol. 310.

Purdie et al., Reproductive and other factors and risk of epithelial ovarian cancer: an Australian case-control study. Survey of Women's Health Study Group. (1995) 62(6) Int J Cancer. 678.

Green et al., *Tubal sterilisation, hysterectomy and decreased risk of ovarian cancer*. Survey of Women's Health Study Group. (1997) 71(6) Int J Cancer. 948.

Shushan et al., *Human menopausal gonadotropin and the risk of epithelial ovarian cancer**. (1996) 65(1) Fertil Steril. 13.

larger proportion of cases reported moderate-a lot of talc use when compared with controls (10.5% vs. 5.6%; p=0.04) without adjusting for potential confounders.

Chang and Risch³⁴ in 1997 reported a case-control study among women diagnosed with histologically confirmed borderline and invasive ovarian cancers in Toronto and southern Ontario. Controls were identified through the Ontario Ministry of Finance and random selection based on geographic residence. A questionnaire was developed and administered in-person, in-home. Exposure to talc was evaluated by reported regular talc use, use of talc/cornstarch combination, talc use with a sanitary napkin, talc use after bathing as well as after bath uses per month, and years of after bath use. Although there was a significant increase in risk of ovarian cancer with any tale exposure (OR: 1.42; 95%) CI: 1.08-1.86), there was no dose-response, and in fact there was a non-statistically significant inverse trend for after bath uses per month: <10 (OR: 1.84; 95% CI: 1.24-2.73), 10-25 (OR: 1.13; 95% CI: 0.74-1.72), >25 (OR: 0.95; 95% CI: 0.61-1.49) and for years of after bath use: : <30 (OR: 1.7; 95% CI: 1.09-2.64), 30-40 (OR: 1.44; 95% CI: 0.96-2.15), >40 (OR: 0.87; 95% CI: 0.54-1.38)) after adjusting for age at time of interview, years of oral contraceptive use, number of full-term pregnancies, average duration of breastfeeding per pregnancy, the occurrence of a tubal ligation or hysterectomy, and having a mother/sister with ovarian or breast carcinoma.

Cook et al. 35 in 1997 conducted a case-control study of women diagnosed with invasive or borderline epithelial ovarian cancer from records of the Cancer Surveillance System of western Washington State from 1986 through 1988. Controls were identified by random digit dialing of a larger control pool for other studies of cancer in women. Information regarding genital powder exposure was collected by in-person interviews. The occurrence of lifetime genital powder application and the exclusive use of types of genital powder application, including perineal dusting, diaphragm storage in powder, powder on sanitary napkins and genital deodorant spray, were collected. Reported exposure also included cumulative lifetime days of use for perineal dusting, cumulative lifetime months for diaphragm storage in powder, cumulative lifetime months for powder on sanitary napkins and cumulative lifetime months for genital deodorant spray. The use of different types of powder, including talcum powder, baby powder, cornstarch, deodorizing powder, bath or body powder and unspecified powder, was also reported. Although there was an increase in risk of ovarian cancer in women who dusted their perineal areas with powder after bathing (OR: 1.8; 95% CI: 1.2-2.9), there was no statically significant increase in risk of ovarian cancer with increasing cumulative lifetime days of any perineal dusting. There was also no statistically significant increase in risk of ovarian cancer with exclusive use of talcum powder (OR: 1.2; 95% CI: 0.6-2.5) or with the use of any talcum powder (OR: 1.6; 95% CI: 0.9-2.8) after adjusting for age.

Godard et al.³⁶ in 1998 reported a case-control study of women with histologic diagnosis of ovarian cancer through the gynecologic oncology clinics of two large teaching

Chang & Risch, Perineal talc exposure and risk of ovarian carcinoma. (1997) 79(12) Cancer. 2396.

Cook et al., *Perineal powder exposure and the risk of ovarian cancer*. (1997) 145(5) Am J Epidemiol. 459.

Godard et al., Risk factors for familial and sporadic ovarian cancer among French Canadians: a case-control study. (1998) 179(2) Am J Obstet Gynecol. 403.

hospitals in Montreal in 1995 and 1996. Controls were obtained through random digit dialing. A questionnaire was developed and administered either in-person or on the phone to obtain medical history and reported exposure to talc on perineum. Talc on the perineum was not statistically associated with an increase in ovarian cancer (OR: 2.49; 95% CI: 0.94-6.58) after adjusting for age at diagnosis, age at last childbirth, age at menarche, age at last oral contraceptive use, tubal ligation or hysterectomy and alcohol use.

Cramer et al.³⁷ in 1999 conducted a case-control study of women with newly diagnosed ovarian cancer in eastern Massachusetts or New Hampshire identified through tumor boards and statewide cancer registries with review of pathology reports. Controls were identified through random digit dialing. Participants were interviewed in-person using a standardized questionnaire and asked if they regularly used talc, baby powder, or deodorant powder dusted or sprayed on "feet, arms, or other non-genital areas, to the genital or rectal area, on sanitary napkins, or on underwear" as well as a husband's use of powder in his genital area. "[T]ypes of powder(s) used, applications per month and total years of use were assessed in talc users." Any reported personal genital exposure was associated with increased risk of ovarian cancer (1.60; 95% CI: 1.18-2.15) after adjusting for age, study center, tubal ligation, BMI, parity, oral contraceptive use, or primary relative with breast or ovarian cancer. Risk of ovarian cancer increased and then fell (inverse relationship) with increasing years of talc use and with increasing total applications, although these estimates were not statistically significant.

Ness et al.³⁸ in 2000 reported a case-control study of women diagnosed with ovarian cancer who were identified from 39 hospitals in the Delaware Valley region. Controls were identified through random digit dialing. Statistically significant associations were observed for the use of talc on the feet, etc. (OR: 1.4; 95% CI: 1.1-1.6), the genital/rectal area (OR: 1.5; 95% CI: 1.1-2.0), sanitary napkins (OR: 1.6; 95% CI: 1.1-2.3) and underwear (OR: 1.7; 95% CI: 1.2-2.4) after adjusting for age, number of pregnancies, family history of ovarian cancer, race, oral contraceptive use, tubal ligation, hysterectomy and breast-feeding. Risk of ovarian cancer increased and then fell (inverse relationship) with increasing years of talc use and with increasing total applications, although these estimates were not statistically significant.

Mills et al.³⁹ in 2004 reported a case-control study of epithelial ovarian cancer in 22 counties of Central California and identified cases through two regional cancer registries as women diagnosed with pathologically confirmed epithelial ovarian cancer from 2000 through 2001. Controls were women 18 years or older selected by random digit dialing. All cases and controls were interviewed by telephone to obtain information on history of adult use of talcum powder in the genital area, calendar year(s) of use, frequency of use, and total duration of use. Although there was a statistically significant increase in risk of ovarian cancer with ever talc use (OR: 1.37; 95% CI: 1.02-1.85) after adjusting for age, race/ethnicity, duration of oral contraceptive use and breast feeding, there was no clear

Cramer et al., Genital talc exposure and risk of ovarian cancer. (1999) 81(3) Int J Cancer. 351.

Ness et al., *Factors related to inflammation of the ovarian epithelium and risk of ovarian cancer.* (2000) 11(2) Epidemiology 111.

Mills et al., Perineal Talc Exposure and Epithelial Ovarian Cancer Risk in the Central Valley of California. (2004) 112 Int'l J. Cancer 458.

dose-response with relation to frequency and duration of talc use and risk of ovarian cancer after adjusting for the same potential confounders. There was a haphazard relationship between reported frequency of use and risk of ovarian cancer, with estimates increasing with rare to several time a month use, then decreasing with 1-3 times per week, and finally increasing with 4-7 times per week. Similarly, there was a haphazard relationship between duration of use and risk of ovarian cancer, as estimates increased at 4-12 years, then decreased at 13-30 years and decreased further at >30 years reported exposure.

Pike et al. 40 in 2004 conducted a case-control study of women in Los Angeles County with histologically confirmed ovarian cancer or borderline tumors identified by the Cancer Surveillance Program between 18 and 74 years of age from 1992 to 1998. Controls were identified using a systematic algorithm based on the address of the patient. Participants were interviewed in person using a questionnaire covering medical and personal lifestyle history. Genital area talc usage was associated with a statistically significant increase in risk of ovarian cancer (OR: 1.60; 95% CI: 1.18-2.18) after adjustment for ethnicity, age, education, family history of ovarian cancer, tubal ligation, BMI, parity, age at last childbirth, number of births, number of incomplete pregnancies, oral contraceptive use, menopausal status, age at menopause and estrogen-progesterone therapy.

Jordan et al. 41 in 2007 reported a case-control study of women aged 18-79 years with histologically confirmed invasive and borderline ovarian cancer in Australia identified by the Australian Ovarian Cancer Study and state-based cancer registries between 2002 and 2005. Women with benign mucinous tumors were also identified by the Australian Ovarian Cancer Study and through records from three major pathology laboratories. Controls were randomly selected from the Australian Electoral Roll after stratifying for age and state. Participants were asked to complete and return a health and lifestyle questionnaire. Neither moderate talc use in the perineal region (OR: 0.4; 95% CI: 0.1-2.0) nor substantial talc use in the perineal region (OR: 1.0; 95% CI: 0.4-2.1) was associated with a statistically significant increase in risk of invasive mucinous ovarian cancer after adjustment for age, education level, parity, use of oral contraceptives, hysterectomy, tubal ligation and smoking status.

Gates et al.⁴² in 2008 reported a nested case-control study of talc use, variants in the GSTM1, GSTT1 and NAT2 genes, and the risk of ovarian cancer using cases from the New England Case-Control Study (NECC) and the Nurses' Health Study (NHS). The "NECC questionnaires included multiple questions about regular use of talcum, baby or deodorizing powder as an adult. Specific questions were asked about type of use (as a dusting powder to the genital area, sanitary napkins, underwear or non-genital areas), frequency of use, age at first use, number of years used and brand of powder used. The 1982 NHS questionnaire requested information on whether the participant had ever commonly applied talcum, baby

Pike et al., Hormonal factors and the risk of invasive ovarian cancer: a population-based case-control study. (2004) 82(1) Fertil Steril. 186.

Jordan SJ, Green AC, Whiteman DC, Webb PM, Australian Ovarian Cancer Study Group. *Risk factors for benign, borderline and invasive mucinous ovarian tumors: epidemiological evidence of a neoplastic continuum*? (2007) 107(2) Gynecol Oncol 223.

Gates et al., *Talc use, variants of the GSTM1, GSTT1, and NAT2 genes, and risk of epithelial ovarian cancer.* (2008) 17(9) Cancer Epidemiol Biomarkers 2436.

or deodorizing powder to the perineal area (no, <once/week, 1-6 times/week or daily) or to sanitary napkins (yes/no)." There was a statistically significant increase in the risk of ovarian cancer with regular genital talc use in participants from the NECC study (OR: 1.62: 95% CI: 1.26-2.09) but no statistically significant increase in risk of ovarian cancer with regular talc use in the NHS (OR: 1.48; 95% CI: 0.82-2.68). Similarly, there was a statistically significant increase in the risk of ovarian cancer with daily genital talc use in participants from the NECC study (OR: 1.61: 95% CI: 1.18-2.2) but no statistically significant increase in risk of ovarian cancer with regular talc use in the NHS (OR: 1.34; 95% CI: 0.65-2.76). Regular genital talc use was associated with a statistically significant increase in risk of ovarian cancer using the combined study population (OR: 1.36; 95% CI: 1.14-1.63) after adjustment for duration of oral contraceptive use, parity, tubal ligation, BMI and duration of hormone replacement therapy. There was no clear dose-response with regard to frequency of genital talc use, with estimates falling with less than once a week usage and then rising with 1-6 times a week and daily usage.

Merritt et al. 43 in 2008 reported the Australian Ovarian Cancer Study, which was an Australia-wide case-control study of epithelial ovarian cancer. Cases were women diagnosed with invasive or low malignant potential ovarian cancer aged 18 to 79 years between 2002 and 2005. Controls were selected from the Australia Electoral Roll. Study participants filled out a comprehensive health and lifestyle questionnaire. "To determine use of talcum powder in the perineal region, participants were asked whether they had ever used powder or talc in the genital area or on underwear or sanitary pads/diaphragm. They were asked their age at first use and years of talc use in these areas." Ever perineal use of talcum powder was associated with a statistically significant increase in risk of ovarian cancer (OR: 1.17: 95% CI: 1.01-1.36) after adjusting for age, education, parity and oral contraceptive use. However, there was no clear dose-response relationship, with a random shape of the exposure-response curve between perineal use of talcum powder and risk of ovarian cancer as well as the risk of cancer subtypes.

Moorman et al.⁴⁴ in 2009 reported a case-control study of epithelial ovarian cancer conducted in a 48-county region of North Carolina between 1999 and 2008. Cases were identified through the North Carolina Cancer Registry and were confirmed histopathologically. Controls were obtained from the same geographic region through random digit dialing. In-person questionnaires were administered, which included questions on medical history and lifestyle factors, including talc ever use. There was no statistically significant increase in risk of ovarian cancer with ever talc use among both white women (OR: 1.04: 95% CI: 0.82-1.33) and African Americans (OR: 1.19: 95% CI: 0.68-2.09) after adjusting for age.

In 2009, Wu et al.⁴⁵ conducted a case-control study of residents of Los Angeles County between the ages of 18 and 74 who had histologically confirmed invasive or

Merritt et al., *Talcum Powder, chronic pelvic inflammation and NSAIDs in relation to risk of epithelial ovarian cancer.* (2008) 122 Int'l J. Cancer 170.

Moorman et al., Ovarian Cancer Risk Factors in African-American and White Women. (2009) 170(5) Am J Epidemiol 598.

Wu et al., Markers of inflammation and risk of ovarian cancer in Los Angeles County. (2009) 124 Int'l J. Cancer 1409.

borderline ovarian cancer diagnosed from 1998 through 2002. Cases were identified by the Cancer Surveillance Program. Controls were identified using a neighborhood recruitment algorithm. Participants were interviewed using a questionnaire that covered medical, gynecological, reproductive and lifestyle history. To determine use of talcum powder, subjects were asked if they ever used talc at least once per month for six months or more. If the response was positive, participants were asked if "they had ever used talc in nonperineal areas (feet, arms, chest or back), perineal areas, or on underwear or sanitary pads/diaphragm," as well "frequency of use (times per month) and years of talc use." Ever talc use was associated with a statistically significant risk of ovarian cancer (OR: 1.48; 95% CI: 1.15-1.91) as was talc applied to the perineal area (OR: 1.53; 95% CI: 1.13-2.09) after adjusting for race/ethnicity, age, education, tubal ligation, family history of breast/ovarian cancer, menopausal status, use of oral contraceptives and parity. A statistically significant increase in risk of ovarian cancer was also seen in those who used talc for more than 20 years and more than 30 times per month (OR: 2.08; 95% CI: 1.34-2.96).

Rosenblatt et al. 46 in 2011 reported a case-control study of women from a 13-county area of Washington State who were 35 to 74 years old and who were diagnosed with invasive or borderline epithelial ovarian tumor between 2002 and 2005. Cases were identified through the Cancer Surveillance System and controls were selected by random digit dialing. In-person interviews were performed, and obtained information on demographic and lifestyle characteristics, medical history and obstetrical history. For powder use on sanitary napkins and deodorant spray, investigators recorded the total number of months of use. For the use of powder on the perineum after bathing, only intervals of at least one year when powder was usually used was recorded. Women were also asked to report the "types of powder(s) used after bathing, including talcum, baby, cornstarch, deodorant, body/bath, and other or unknown. The extent of exposure to perineal powder after bathing was assessed as lifetime duration of use . . . and as the estimated lifetime number of applications." There was no statistically significant increase in the risk of ovarian cancer for using powder after bathing (OR: 1.27; 95% CI: 0.97-1.66) after adjusting for age, calendar year of diagnosis/reference date, county of residence, number of full-term births and duration of hormonal contraception.

Kurta et al.⁴⁷ in 2012 conducted a case-control study using data from the Hormones and Ovarian Cancer Prediction (HOPE) study. Cases were residents of Western Pennsylvania, Eastern Ohio and Western New York State and had histologically confirmed ovarian, peritoneal or fallopian tube cancers diagnosed between 2003 and 2008. Controls were frequency matched and identified through random digit dialing. Trained interviewers collected questionnaire data that included medical history and information about lifestyle. "Perineal talc use was defined as ever using dusting powder or deodorizing spray on the genital or rectal areas, on sanitary napkins, on underwear, or on diaphragms or cervical caps." Perineal talc use was associated with a statistically significant increase in risk of ovarian cancer (OR: 1.40; 95% CI: 1.16-1.69) after adjusting for age and education.

Rosenblatt et al., *Genital powder exposure and the risk of epithelial ovarian cancer*. (2011) 22 Cancer Causes Control 737.

Kurta et al., *Use of Fertility Drugs and Risk of Ovarian Cancer: Results from a U.S.-Based Case-Control Study.* (2012) 21(8) Cancer Epidemiol Biomarkers Prev. 1282.

Terry et al. 48 in 2013 reported on a pooled analysis of case-control studies using data from the Ovarian Cancer Association Consortium. Investigators used data from eight case-control studies and included 8,525 cases of ovarian, fallopian tube or peritoneal cancer and 9,859 controls. Genital powder use was defined as "any type of powder (talc, baby, deodorizing, cornstarch, or unspecified/unknown) applied directly or indirectly (by application to sanitary pads, tampons, or underwear) to the genital, perineal, or rectal area." Criteria for regular use varied between studies from "ever use" to "one year or longer." "Women who reported both genital and non-genital powder use were classified as genital users." Genital use of powder was associated with a statistically significant increase in risk of ovarian cancer when compared with no powder use (OR: 1.24; 95% CI: 1.15-1.33) after adjusting for age, oral contraceptive use, parity, tubal ligation history, BMI and race/ethnicity.

Wu et al. 49 in 2015 reported a case-control study of women with newly diagnosed histologically confirmed invasive epithelial ovarian cancer identified through the Cancer Surveillance Program. Cases were non-Hispanic white, Hispanic, or African American women aged 18 to 74 diagnosed between 2003 and 2008. In-person interviews were conducted using questionnaires, which included questions on demographics, lifestyle, medical history, family history and genital talc use. Results are based on pooling of four case-control studies in Los Angeles County investigating invasive epithelial ovarian cancer. Genital talc use was associated with a statistically significant increase in risk for invasive ovarian cancer in all study participants (OR: 1.46; 95% CI: 1.27-1.69); non-Hispanic whites (OR: 1.41; 95% CI: 1.21-1.67) and Hispanics (OR: 1.77; 95% CI: 1.20-2.62), but not in African Americans (OR: 1.56; 95% CI: 0.80-3.04). Every five years of talc use was also associated with a statistically significant increase in risk for invasive ovarian cancer in non-Hispanic whites (OR: 1.14; 95% CI: 1.08-1.21) and Hispanics (OR: 1.18; 95% CI: 1.02-1.36), but not in African Americans (OR: 1.15; 95% CI: 0.90-1.47). Estimates were adjusted for menopausal status, age at menarche, hormone therapy use, BMI, income, education, parity, oral contraceptive use, tubal ligation, endometriosis and family history of ovarian cancer.

Schildkraut et al.⁵⁰ in 2016 reported a case-control study of women enrolled in the African American Cancer Epidemiology Study from 11 locations in the United States. Cases included African American women aged 20 to 79 with newly diagnosed ovarian cancer. Controls were African American women who were identified through random digit dialing. Participants completed a baseline telephone interview, which includes questions on demographics, medical history and information on lifestyle. "[P]articipants were asked whether they had ever regularly used talc, cornstarch, baby, or deodorizing powders. Participants were considered 'regular users' if they reported using any of these powders at least one time per month for at least six months, and 'never users' if they did not. Regular users were asked about their frequency and duration of use, age at first use, and whether

Terry et al., Genital Powder Use and Risk of Ovarian Cancer: A Pooled Analysis of 8,525 Cases and 9,859 Controls. (2013) 6(8) Cancer Prev Res 811.

Wu et al., African Americans and Hispanics Remain at Lower Risk of Ovarian Cancer Than Non-Hispanic Whites after Considering Nongenetic Risk Factors and Oophorectomy Rates. (2015) 24(7) Cancer Epidemiol Biomarkers Prev. 1094 ("Wu 2015").

⁵⁰ Schildkraut (2016).

they applied powders to genital areas (including on underwear or sanitary napkins, or on birth control devices like diaphragms) and/or nongenital areas." There was a statistically significant increase in the risk of ovarian cancer with any genital use of powder (OR: 1.44; 95% CI: 1.11-1.86) after adjusting for age at diagnosis/interview, study site, education, tubal ligation, parity, BMI, duration of oral contraceptive use, first-degree family history of breast or ovarian cancer and interview year. In addition, as discussed above, when investigators stratified by the interview date, there was no statistically significant association between ovarian cancer and any genital use of body powder if the interview date was before 2014 (OR: 1.19; 95% CI: 0.87-1.63), but if the interview date was after 2014, there was a statistically significant increase in risk of ovarian cancer with any genital use of body powder (OR: 2.91: 95% CI: 1.70-4.97), after adjusting for the same potential confounders.

Cramer et al.⁵¹ in 2016 reported a pooled analysis of case-control studies of women residing in Eastern Massachusetts and New Hampshire diagnosed with ovarian cancer between the ages of 18 and 80 using data from the NHS and several sites from the Ovarian Cancer Association Consortium. Controls were identified through random digit dialing. Participants "were asked whether they 'regularly' or 'at least monthly' applied powder to the genital or rectal area, sanitary napkins or tampons, underwear, or areas other than the genital-rectal area. Additional details included type of powder, age begun, years used, and applications per month. Lifetime exposure was estimated by multiplying frequency of application per month by months used." This was divided by 360 to yield talc-years, which were divided into separate quartiles for dose-response analysis. Any genital powder use was associated with a statistically significant increase in the risk of ovarian cancer (OR: 1.33; 95% CI: 1.16-1.52) after adjusting for reference age, study center and study phase. There was no clear pattern suggesting a dose-response effect, with a random sine wave pattern with increasing risk, then decreasing risk, then increasing risk with total genital talc applications.

D. Cohort Studies

Gertig et al.⁵² reported the relationship between perineal talc use and ovarian cancer using participants from the NHS. This is a prospective study of 121,700 registered nurses in the United States who were ages 30-55 years at enrollment in 1976. Talc exposure was not evaluated when the study began, but questions regarding talc exposure were added in 1982. 78,630 women completed the questions regarding talc at baseline and formed the cohort for analysis and were followed for 14 years (1982-1996). There were 307 women who were subsequently diagnosed with ovarian cancer. After adjusting for confounders, no statistically significant association was found with ever talc use, with a relative risk for ovarian cancer of 1.09 (95% CI: 0.86-1.37) when compared to never talc use. Similarly, no statistically significant association was found with daily talc use, with a relative risk of 1.12 (95% CI: 0.82-1.55) when compared with never talc after adjusting for age, parity, duration of oral contraceptive use, BMI, tubal ligation, smoking status and postmenopausal hormone use. There was an increase in risk of invasive serous ovarian cancer, with a relative risk of

Cramer et al., *The Association Between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States.* (2016) 27(3) Epidemiology 334.

Gertig et al., *Prospective Study of Talc Use and Ovarian Cancer*. (2000) 92 J. Nat. Cancer Inst. 249.

1.40 (95% CI: 1.02-1.91) among ever talc users when compared to never talc users after adjusting for the same potential confounders.

Gates et al.⁵³ examined the association between ovarian cancer risk factors and ovarian cancer by histological subtype in the NHS and Nurses' Health Study II (NHSII). This prospective study included 221,866 women who completed baseline and biennial follow-up providing information on lifestyle factors and disease diagnoses. Follow-up was longer than the Gertig study and was 24 years in the NHS (1982-2006) and six years in the NHSII. There were 924 women who subsequently developed ovarian cancer and 721 cases with the histologies of interest (496 serous invasive, 139 endometrioid, 86 mucinous). Information on regular talc use was collected in 1982 and available for NHS participants only (108,870 women). No statistically significant increases in risk were found between talc used greater than once weekly with all epithelial (RR: 1.06; 95% CI: 0.89-1.28), serous invasive (RR: 1.06; 95% CI: 0.84-1.35), endometrioid (RR: 1.06; 95% CI: 0.66-1.69), or mucinous (RR: 1.5; 95%CI: 0.84-2.66) ovarian cancer when compared with less than once weekly talc use after adjusting for age, BMI, activity level, parity, breastfeeding, oral contraceptive use, tubal ligation, age at menopause, estrogen use, menopause status, smoking status and family history of breast or ovarian cancer.

Houghton et al.⁵⁴ assessed the perineal powder use and the risk of ovarian cancer prospectively in the Women's Health Initiative observational cohort, which enrolled postmenopausal women aged 50-79 from 40 clinical centers across the United States from 1993 to 1998 through 2012. Participants completed annual questionnaires to obtain information on risk factors and outcomes, including ovarian cancer. Perineal powder was assessed via self-report at baseline by asking participants if they had ever used powder on their private parts (genital areas). Those who answered yes were asked questions regarding duration of use. Participants were also asked about use with diaphragms and sanitary napkins or pads. There were 61,576 women who completed baseline questionnaires and followed for a mean 12.4 years. There were 429 women who subsequently developed ovarian cancer. No statistically significant increase in risk of ovarian cancer between ever powder use on genitals (HR: 1.12; 95% CI: 0.92-1.36) and never powder use on genitals was found after adjusting for age, race, duration of oral contraceptive use, duration of hormone replacement therapy, family history, age at last birth, BMI, smoking status, tubal ligation and parity. There was also no statistically significant increase in risk from duration of use between talc use greater than 10 years (RR: 0.98; 95% CI: 0.75-1.29) or greater than 20 years (RR: 1.10; 95% CI: 0.82-1.48) when compared with never talc use after adjusting for the same potential confounders. Similarly, no statistically significant increase in risk was found for all serous (RR: 1.16; 95% CI: 0.88-1.53), serous invasive (RR: 1.13; 95% CI: 0.84-1.51), mucinous (RR: 1.03; 95% CI: 0.47-2.27), or endometrioid (RR: 1.29; 95% CI: 0.64-2.61) ovarian cancer between ever talc use and never talc use after adjusting for the same potential confounders.

Gates et al., *Risk Factors for Epithelial Ovarian Cancer by Histologic Subtype*. (2010) 171 Am. J. Epidemiology 45.

⁵⁴ Houghton et al., *Perineal Powder Use and Risk of Ovarian Cancer*. (2014) 106(9) J Nat. Cancer Inst.

Gonzalez et al.⁵⁵ evaluated the effect of douching and talc use on the risk of ovarian cancer prospectively in the Sister Study, which enrolled women aged 35 to 74 who had never had breast cancer and who had a sister or half-sister diagnosed with breast cancer in the United States and Puerto Rico from 2003 to 2009 through 2014. Participants completed computer-assisted telephone interviews, which included questions about lifestyle factors and health conditions. Participants also completed a self-administered questionnaire about personal products used in the 12 months prior to enrollment, which included questions about frequency of douching as well as talc use, method of talc use, and frequency of talc use. There were 50,884 women who completed questionnaires and, after excluding participants who had bilateral oophorectomies or ovarian cancer before enrollment or who had no follow-up information, 41,654 women were followed for a median of 6.6 years. There was no statistically significant increased risk of ovarian cancer (HR: 0.73; 95% CI: 0.44-1.2) with ever talc use during the 12 months prior to the study when compared with never talc use after adjusting for race, BMI, parity, duration of oral contraceptive use, baseline menopausal status and tubal ligation. There was, however, a statistically significant increase in risk of ovarian cancer (HR: 1.9: 95% CI: 1.2-2.9) with douching/no talc use when compared with neither use as well as an increased risk of ovarian cancer with douching in the past 12 months (HR: 1.8: 95% CI: 1.2-2.8) when compared with never douching after adjustment for the same potential confounders. This study highlights the potential for douching to be a confounder in previous investigations, and all but one study failed to control for the potential confounding effect of douching and risk of ovarian cancer.

E. Summary Of Observational Studies

Evaluating the association between talc use and ovarian cancer in case-control studies poses several challenges that require attention. The assessment of exposure is difficult because it is solely based on self-report. Talc purchasing and use are not documented in the medical records or available in pharmacy records. As there is no reliable method of confirming talc usage, the accuracy and validity of these studies even under perfect circumstances can be dramatically affected by reporting bias. Additionally, the quantification of talc exposure is very difficult and may be impossible to verify accurately. Powders have varying amounts of talc and can be applied by various methods, leading to more or less exposure. There is no standardized dose/amount that is used, and there is no standard quantification method with verification that has been universally employed among the studies in the medical literature. Various studies collected information on the reported use of talc, diaphragm with talc, diaphragm storage only, all over body talc, genital talc, legs only talc, not genital talc, talcum powder in the perineum, talcum powder on sanitary pads, talcum powder on diaphragms, after bathing only, baby powder only, deodorizing powder, dusting powder to the perineum, any dusting powder, talc around the abdomen/ perineum, perineal dusting, genital powder application, genital/rectal talc, powder to genitals, powder to diaphragm, or powder to sanitary napkins. As such, there are no casecontrol or cohort epidemiologic studies or meta-analyses that have investigated the effect of a standardized amount of talc usage or a standardized method of use to ensure consistency of the assessment of exposure. In addition, only a few epidemiologic studies have found any dose-response relationship between genital talc use and ovarian cancer.

⁵⁵ Gonzalez (2016).

Furthermore, as in all case-control studies, recall bias is also of great concern. This arises from the phenomenon that cases are more likely than controls to think about and remember past exposures. Recall bias leads to differential misclassification of exposure and a falsely elevated estimate of risk between talc exposure and ovarian cancer. This is especially important if an exposure such as talc appeared in the news or was discussed in the public arena as having a possible causative association with ovarian cancer. There is evidence to suggest that hospital-based case-control studies are less likely to be subject to recall bias than population-based case-control studies because the degree to which study subjects think about possible past exposure is more similar (given that both cases and controls are being hospitalized).⁵⁶

In general, cohort studies provide more evidence for a causal relationship between exposure and outcome and can often study many exposure-outcome relationships with less chance for bias and confounding than case-control studies if the design, conduct, data collection and analysis are proper. However, cohort study designs also remain susceptible to certain types of bias and confounding, and cohort studies are often very expensive, take a long time to conduct, and may be difficult to perform, especially if the outcome of interest is rare.

Plaintiffs' epidemiologists repeatedly downplay the results of the four relevant cohort studies. Dr. McTiernan, for example, has the opinion that there are a number of "serious limitations" in the cohort studies, including that they were not specifically designed to investigate the relationship between talc use and ovarian cancer, but rather examined a number of different outcomes.⁵⁷ This point is irrelevant as cohort studies are designed specifically to have the ability to investigate many exposure-outcome relationships, even if the cohort study was not specifically designed to look at the exposureoutcome relationship of interest. Dr. McTiernan also criticizes the cohort studies on other grounds – that they did not obtain detailed lifetime histories of talcum powder use and therefore could not measure dose-response; that the sample sizes were too small to detect a relative risk like 1.24; and that the latency period of ovarian cancer makes these studies "not likely reflective of risk from exposure to talcum powder products."58 But as just explained, no type of study in this context can provide an accurate measure of dose-response due to the problems inherent in relying on study participants' subjective assessments regarding the amount of talcum powder they use, and as I elaborate in part VIII.A below, Dr. McTiernan's criticisms with respect to latency and sample size are speculative and wrong. All of this suggests that Dr. McTiernan's criticisms reflect her own bias. While cohort studies also have their own limitations like any other study design, the focused criticism of cohort studies by plaintiffs' epidemiologists, even though they are generally considered more reliable than case-control studies, suggests a biased approach to their analyses.

Oleckno, *Epidemiology: Concepts and Methods*. (2008) at 207; Infante-Rivard, *Hospital or Population Controls for Case-Control Studies of Sever Childhood Diseases?* (2003) 157(2) Am J Epidemiol 176.

McTiernan Report 46.

⁵⁸ *Id.* at 46-47.

F. Meta-Analysis

Gross et al.⁵⁹ in 1995 reviewed nine case-control studies (all previously described above) and one cohort study to evaluate the association between talc and ovarian cancer. The authors combined the results of seven studies and found an increase in risk of ovarian cancer (RR: 1.20; 95% CI: 1.01-1.44) with any talc exposure, and combined the results of five studies and, after adjustment, found an increase in risk of ovarian cancer (RR: 1.29; 95% CI: 1.02-1.63). Unfortunately, there is little detail provided regarding the methods used to identify, evaluate and analyze the studies, making the interpretation of this investigation challenging and problematic. In addition, all of the limitations described above with respect to the included case-control studies remain inherent within this investigation.

Huncharek et al.⁶⁰ in 2003 evaluated 15 case-control studies (all previously described above) and one cohort study using a predefined technique for literature search, study inclusion and analysis. The study included data from 11,933 subjects and pooling all subjects demonstrated a summary OR of 1.33 (95% CI: 1.16-1.45) for ovarian cancer with being exposed to never versus ever talc, none versus any talc and never versus any talc. Seven studies analyzed together yielded an inverse relationship between duration of exposure and ovarian cancer, with low-exposure groups having a higher risk and high-exposure groups having a lower risk, demonstrating a lack of clear dose-response. Hospital-based case-control studies demonstrated no significant relationship between talc use and risk of ovarian cancer (RR: 1.19; 95% CI: 0.99-1.41), while population-based case-control studies showed an increased risk of ovarian cancer with talc use (RR: 1.38; 95% CI: 1.25-1.52). As mentioned above, the limitations of the previously described case-control studies remain inherent within this review. Furthermore, differences in recall bias between hospital-based and population-based case-control studies provide one possible explanation for differences found between the two different study designs.

Huncharek et al.⁶¹ in 2007 evaluated nine case-control studies (all previously described above) investigating the association between talc via dusting of contraceptive diaphragms and ovarian cancer in 2,281 cases of ovarian cancer and 3,608 controls using a predefined technique for literature search, study inclusion and analysis. Pooling all subjects demonstrated no significant risk of ovarian cancer with being exposed to talc via dusting of contraceptive diaphragms (OR 1.03; 95% CI: 0.80-1.37). One included case-control study did not explicitly provide data on talc use via contraceptive diaphragms, and without data from this study, the resultant OR was 1.12 (95% CI: 0.84-1.48).⁶²

Gross & Berg, A meta-analytical approach examining the potential relationship between talc exposure and ovarian cancer. (1995) 5(2) J Expo Anal Environ Epidemiol. 181.

Huncharek et al., *Perineal Application of Cosmetic Talc and Risk of Invasive Epithelial Ovarian Cancer: A Meta-analysis of 11,933 Subjects from Sixteen Observational Studies*. (2003) 23 Anticancer Res. 1955.

Huncharek et al., *Use of cosmetic talc on contraceptive diaphragms and risk of ovarian cancer: a meta-analysis of nine observational studies.* (2007) 18 Eur J Cancer Prev 422.

Dr. Zambelli-Weiner has criticized the Huncharek studies and did indeed find some errors in them. However, her analysis did not show that any errors materially affected the conclusions of these studies.

Langseth et al.⁶³ in 2008 reported on a meta-analysis of 20 case-control studies and make reference to one cohort study. Results were separated into 14 population-based case-control studies and six hospital-based case-control studies. The investigators state that the cohort study showed "no association between cosmetic talc use and risk of all subtypes of ovarian cancer combined," although the results were not shown. The hospital-based case-control studies reported a pooled odds ratio of 1.12 (95% CI: 0.92-1.36) and the population-based case-control studies reported a pooled odds ratio of 1.40 (95% CI: 1.29-1.52). The combined OR from all case-control studies using a fixed effects model was 1.35 (95% CI: 1.26-1.46). This meta-analysis reflects some methodological weaknesses, including the fact that there is no report of a literature search strategy and no structured review of the literature for eligible studies.

Berge et al.⁶⁴ in 2018 reported on a meta-analysis of 27 studies, which included 24 case-control studies and three cohort studies. The authors reported a "small increased risk" with a summary relative risk of 1.22 (95% CI: 1.13-1.30) for ever talc use and ovarian cancer, but found that the cohort studies did not show an association (RR 1.02 (95% CI: 0.85-1.20)). The investigators demonstrated that given the total number of exposed and unexposed cases of ovarian cancer, the statistical power of the cohort studies to detect a relative risk difference of 1.25 was 0.99, which matched that of the case-control studies, and thus rejected inadequate power as an explanation for the lack of an association between talc exposure and ovarian cancer in the cohort studies and the heterogeneity between study designs. The study found a "weak trend in RR with duration and frequency of genital talc use," but cautioned that this analysis was based on few studies and that the "modest association between both duration and frequency of use of talc may reflect a true relationship, or recall bias or confounding." The authors noted that several aspects of their analysis, including heterogeneity between case-control and cohort studies, did "not support a causal interpretation of the association."

Penninkilampi et al. 65 in 2018 reported on a meta-analysis of 24 case-control studies and three cohort studies. The study reported a summary odds ratio of 1.31 (95% CI: 1.24, 1.39) for any talc use and ovarian cancer, but this association was not present in cohort studies (OR 1.06 (95% CI: 0.90-1.25)). Although the study reported a statistically significant association in the cohort studies for serous invasive ovarian cancer (OR 1.25 (95% CI: 1.01, 1.55)), it excluded the 2010 Gates study from its analysis. The study further found that more than 3,600 lifetime talc applications "were slightly more associated with ovarian cancer than" fewer than 3,600 lifetime applications (odds ratios of 1.42 and 1.32, respectively), but noted that these data came from case-control studies and were therefore "prone to recall bias" (which the study observed could be particularly problematic due to recent media coverage of talc lawsuits). It also observed that the "mechanism by which perineal talc use may increase the risk of ovarian cancer is uncertain," and in particular that use of NSAIDs "is not inversely associated with the incidence of ovarian cancer, as may be

Langseth et al., *Perineal use of talc and risk of ovarian cancer*. (2008) 62 J Epidemiol Community Health 358.

Berge et al., Genital use of talc and risk of ovarian cancer: a meta-analysis. (2018) 27 Eur J Cancer Prev 248.

Penninkilampi and Eslick, *Perineal Talc Use and Ovarian Cancer: A Systematic Review and Meta-Analysis*. (2018) 29(1) Epidemiology 41.

expected if the etiology was related to chronic inflammation." The authors cited the "substantial need for further research on a potential mechanism" as one reason why a causal relationship could not be established with any certainty.

In summary, the published meta-analyses have been of varying quality and in general observed a weak association (odds ratio roughly 1.3) between talc use and ovarian cancer. However, as the meta-analyses have noted, the observed increased risk is restricted entirely to case-control studies and may be a result of bias and/or confounding. Although different studies employ different techniques to attempt to adjust for these issues, metaanalyses are only as good as their underlying studies, and the fact that the meta-analyses themselves combine studies that used different adjustment approaches can exacerbate issues regarding overall reliability.

VII. **ANALYSIS OF STUDIES**

It is my opinion that there is insufficient evidence to support a causal association between exposure to talc and risk of ovarian cancer based on the body of available epidemiologic observational studies that have been performed and reported in the literature. While there is no single method for undertaking a causal assessment based on epidemiology, the criteria formulated by Austin Bradford Hill are often used and are considered the gold standard for evaluating causation once an association has been identified. These include: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimentation and analogy. ⁶⁶ While Bradford Hill suggests nine different viewpoints to consider in a careful examination of the association between exposure and outcome before concluding that a causal relationship exists, it is important to understand that none of his concepts provide unquestionable evidence for or against a causative relationship and none is required as essential or absolutely necessary. They can simply help to provide a framework to guide epidemiologists to decide whether or not there is another more likely way of explaining the association, including non-causal explanations for the results of individual studies. These other explanations can come from bias, confounding and/or random error (as discussed above), can lead to risk estimates that are falsely higher or lower than actual risk and can even lead to conclusions that an exposure causes disease when it does not.

Even before starting such an analysis, however, one should examine whether the epidemiologic literature establishes a true association – the fundamental predicate of a Bradford Hill analysis. As Hill noted in his seminal article setting forth his epidemiologic approach, before evaluating causation, studies must "reveal an association between two variables, perfectly clear-cut and beyond what we would care to attribute to the play of *chance*." ⁶⁷ As I discuss further below, this requirement is likely not satisfied here because we are not presented with a "clear cut" association.

A number of the Hill factors further weigh decidedly against a causal finding in this instance. In particular, and as detailed in this section, lack of consistent results among studies, lack of reliable assessment of exposure to talc, lack of a dose-response relationship

⁶⁶ Hill, Environment and disease: association or causation? (1965) 58 Proc Royal Soc Med. 295.

Id.

and lack of strength of association all contribute to my opinion that there is a lack of reliable evidence to conclude that exposure to talc increases the risk of ovarian cancer.

A. Lack Of Consistency Between Studies

One of the most striking aspects of the studies is their inconsistency.

Some studies demonstrate an association between talc use and ovarian cancer, while others do not. As set forth in the table below, there are seven hospital-based case-control studies that consistently demonstrate no statistically significant association between exposure to talc and risk of ovarian cancer. There are four cohort studies that also consistently demonstrate no statistically significant association between exposure to talc and risk of ovarian cancer. There are 26 population-based case-control studies that demonstrate inconsistent results, with some studies demonstrating a statistically significant association between exposure to talc and risk of ovarian cancer, while others demonstrate no statistically significant association between exposure to talc and risk of ovarian cancer. This lack of consistency in finding a statistically significant association between talc use and risk of ovarian cancer likely arises from several factors. The studies use varying questionnaires, describe varying self-reported assessments of talc exposure and varying self-reported assessments of frequency and duration of talc use, and apply no adjustment or varying levels of adjustment for potential confounders. Finally, each one of these observational studies has limitations (recall bias and confounding in case-control studies; lack of repeated measure of exposure in cohort studies). The consistency of effect between hospital-based case-control studies and the cohort studies is somewhat assuring and the heterogeneity among population-based case-control studies weigh against finding a causal relationship between exposure and outcome. In addition, even though the methods for at least two of the reported meta-analyses were relatively robust, the studies that were used in all of the meta-analyses were of limited quality.

B. Lack Of Reliable Assessment Of Talc Exposure

In all of the studies investigating the possible causal association between talc and ovarian cancer, assessment of talc exposure relies on self-report. Talc use is not documented in a medical record or in a pharmacy record in order to confirm, or at least verify, self-reported use. This has a substantial potential to lead to recall and reporting bias, in particular in case-control studies, although this type of bias may also be present in cohort studies. Furthermore, self-reported exposures were obtained from responses to questionnaires on the use of talc or talc products, including: use of talc, diaphragm with talc, diaphragm storage only, all over body talc, genital talc, legs only talc, non-genital talc, talcum powder in the perineum, talcum powder on sanitary pads, talcum powder on diaphragms, "genital fiber use", after bathing only, baby powder only, deodorizing powder, dusting powder to the perineum, any dusting powder, talc around the abdomen/perineum, perineal dusting, genital powder application, genital/rectal talc, powder to genitals, powder to diaphragm, or powder to sanitary napkins. Varying amounts of talc exist within different powders, varied methods can be used to apply talc either by spray or by powder, varying amounts may be applied on diaphragms, and the amount applied may be very different depending on the method of application and the person applying it. Questions arise, such as: How much talc is used in dusting? How much talc is used in the perineum? How much

talc is used after bathing only, etc.? In addition, there are no observational studies or metaanalyses that have investigated the effect of a standardized amount of talc usage or a standardized method of use to ensure consistency of the assessment of exposure. As an epidemiologist, I find this lack of ability to quantify a dose to be a gaping hole in the exposure-outcome relationship and a tremendous limitation in all of the epidemiologic studies evaluating talc and risk of ovarian cancer.

C. Lack Of A Dose-Response To Talc Exposure

There have been very few case-control studies and no cohort studies that have reported a dose-response relationship between talc exposure and risk of ovarian cancer; and measures of dose-response generally have varied widely among studies.

Dose-response curves may increase with increasing exposure (i.e., increased risk of heart disease with increasing level of cholesterol) and decrease with increasing exposure (i.e., decreased risk of heart disease with increased doses of cholesterol lowering agent). Typically, a dose-response curve that depicts an increased risk would demonstrate increasing risk with increasing quantity of exposure, increasing frequency of exposure, increasing duration of exposure or a combination. When the curve is concave, convex or has a haphazard random shape, that is a red flag to epidemiologists. Studies that have evaluated the potential for dose-response have found: (1) random or "sine wave" (up and down) risk⁶⁸; (2) convex (up then down) risk⁶⁹; (3) concave (down then up) risk⁷⁰; and (4) even decreasing risk⁷¹ with either increasing frequency or duration of talc use. Studies by Wu⁷² and Cramer⁷³ demonstrated increasing risk of ovarian cancer with increasing frequency and duration of reported talc use, but not all cut-offs were statistically significant. Only one study⁷⁴ demonstrated a statistically significant association between duration of reported talc use (per five years of reported genital talc use) and risk of ovarian cancer in Hispanics (OR: 1.18; 95% CI: 1.02-1.36) and non-Hispanic whites (OR: 1.14; 95% CI: 1.08-1.21).

In sum, the vast majority of both case-control and cohort studies demonstrate no statistically significant dose-response relationship between talc use and risk of ovarian cancer.

D. Lack Of Strength Of Association

Another indicator of causality is strength of association.

⁶⁸ Booth (1989); Wong (1999); Cook (1997); Mills (2004); Merritt (2008); Gertig (2000).

⁶⁹ Cramer (1999); Chang (1997); Cramer (2016); Rosenblatt (2011); Houghton (2014).

Whittemore (1988); Gates (2008).

⁷¹ Hartge (1983).

⁷² Wu (2009).

⁷³ Cramer (2016).

⁷⁴ Wu (2015).

Relative risk and odds ratios are two measures of strength of association. The higher the relative risk or odds ratio, the greater the likelihood that the relationship is causal. For instance, the International Primary Pulmonary Hypertension Study was a case-control study where cases were defined as patients with pulmonary hypertension without a known reason. Controls were randomly selected from lists of consecutive patients seen by the same general practitioner. Each participant went through a face-to-face interview and was asked about demographics, medical and surgical history as well as medication history. Use of appetite suppressants was associated with a statistically significant increase in risk of pulmonary hypertension (OR: 6.3; 95% CI: 3.0-13.2) after adjusting for systemic hypertension, use of cocaine or intravenous drugs, smoking status, BMI, weight loss behavior, use of thyroid extracts and possible exposure to anorexic agents. The odds ratio in this study was found to be 6.3, and with a relative risk this high it is unlikely that any other factor could be the cause of the association.

The higher the relative risk or odds ratio, the less likely other factors can explain the association. Similarly, for relative risks or odds ratios that are lower, it is important to understand that there may be factors other than the exposure of interest that can explain the association. Rosenblatt (1998)⁷⁶ found a statistically significant association between women who had ever douched and those who used powder in the perineal area (OR: 2.9: 95% CI: 1.6-5.1). Gonzalez et al. 77 as described above evaluated the effect of douching and talc use on the risk of ovarian cancer prospectively in the Sister Study. Results demonstrated no statistically significant increased risk of ovarian cancer (HR: 0.73; 95% CI: 0.44-1.2) with ever talc use when compared with never talc use after adjusting for confounders. However, there was a statistically significant increase in risk of ovarian cancer (HR: 1.9: 95% CI: 1.2-2.9) with douching/no talc use when compared with neither use as well as a statistically significant increase in risk of ovarian cancer with douching in the past 12 months (HR: 1.84: 95% CI: 1.2-2.8) when compared with never douching. As previous studies (except for Harlow et al. (1992)) did not account for douching, the relatively weak statistically significant associations could potentially be explained by confounding. One explanation could be that since talc users are more likely to douche and douching appears to increase risk of ovarian cancer, previous studies may not have captured the correct exposure (douching) in the causal pathway and mistakenly concluded talc to be the exposure that increased risk of ovarian cancer instead of douching. Similarly, it is also possible that the relatively weak yet statistically significant associations seen in some of the case-control studies could be explained by other potential confounders that were only considered in some of the studies or that have not yet even been identified.

In summary, based on evidence in the literature and the lack of consistency across studies, the lack of a reliable assessment of actual talc exposure, the lack of a significant dose-response to talc exposure, and a weak strength of association between a poorly characterized exposure to talc and risk of ovarian cancer, it is impossible to conclude that talc exposure increases the risk of ovarian cancer.

Abenhaim et al., *Appetite-Suppressant Drugs and the Risk of Primary Pulmonary Hypertension*. (1996) 335(9) N Engl J Med 609.

⁷⁶ Rosenblatt (1998).

⁷⁷ Gonzalez (2016).

Author	Odds		Statistically			
	Ratio/Relative Risk/Hazard	95% CI	Significant Association?			
	Ratio					
Hospital-based case-control studies						
Hartge et al. (1983)	0.70	0.04-1.10	No			
Whittemore et al. (1988)	1.45	0.81-2.60	No			
Booth et al. (1989)	1.30	0.80-1.90	No			
Rosenblatt et al. (1992)	1.70	0.70-3.90	No			
Tzonou et al. (1993)	1.05	0.28-3.98	No			
Hartge and Stewart (1994)	0.30 (5-9 years	0.10-1.40	No			
	of talc	0.20-1.50				
	exposure)					
	0.50 (10+					
	years)					
Wong et al. (1999)	1.13	0.88-1.44	No			
Population-based case-control	studies					
Cramer et al. (1982)	1.92	1.27-2.89	Weak			
Harlow and Weiss. (1989)	1.10	0.70-2.10	No			
Harlow et al. (1992)	1.50	1.00-2.10	Weak			
Chen et al. (1992)	3.90	0.90-10.6	No			
Cramer and Xu (1995)	1.60	1.20-2.10	Weak			
Purdie et al. (1995)	1.27	1.04-1.54	Weak			
Green et al. (1997)	1.30	1.10-1.60	Weak			
Shushan et al. (1996)	1.97	1.06-3.66	Weak			
Chang and Risch (1997)	1.42	1.08-1.86	Weak			
Cook et al. (1997)	1.60	0.90-2.80	No			
Godard et al. (1998)	2.49	0.94-6.58	No			
Cramer et al. (1999)	1.60	1.18-2.15	Weak			
Ness et al. (2000)	1.50	1.10-2.00	Weak			
Mills et al. (2004)	1.37	1.02-1.85	Weak			
Pike et al. (2004)	1.60	1.18-2.18	Weak			
Jordan et al. (2007)	1.00	0.40-2.10	No			
Gates et al. (2008)	1.36	1.14-1.63	Weak			
Merritt et al. (2008)	1.17	1.01-1.36	Weak			
Moorman et al. (2009)	Afr. Am.: 1.19	Afr. Am:	No			
		0.68-2.09				
	Caucasian: 1.04	Caucasian:				
		0.82-1.33				
Wu et al. (2009)	1.53	1.13-2.09	Weak			
Rosenblatt. (2011)	1.27	0.97-1.66	No			
Kurta et al. (2012)	1.40	1.16-1.69	Weak			
Wu et al. (2015)	1.46	1.27-1.69	Weak			
Schildkraut et al. (2016)	1.44	1.11-1.86	Weak			
Pooled case-control studies						
Terry et al. (2013)	1.24	1.15-1.33	Weak			

Author	Odds Ratio/Relative Risk/Hazard Ratio	95% CI	Statistically Significant Association?	
Cramer et al. (2016)	1.33	1.16-1.52	Weak	
Cohort studies				
Gertig et al. (2000)	1.09	0.86-1.37	No	
Gates et al. (2010)	1.06	0.89-1.28	No	
Houghton et al. (2014)	1.12	0.92-1.36	No	
Gonzalez et al. (2016)	0.73	0.44-1.20	No	

VIII. METHODOLOGICAL FLAWS IN PLAINTIFFS' EXPERTS' EPIDEMIOLOGY-BASED OPINIONS

I was asked to address whether the causation analyses set forth in the expert reports of plaintiffs' epidemiology experts were conducted in a scientifically reliable manner. As set forth below, I have concluded that there are several significant methodological flaws that are prevalent in multiple plaintiffs' experts' reports, rendering their analyses unreliable.

A. Disregard For The Hierarchy Of Evidence

The hierarchy of evidence is well-established within the scientific community. Consistent with that hierarchy, epidemiologists consider meta-analyses of multiple randomized clinical trials, followed by individual randomized clinical trials, as the strongest evidence to support a causal relationship between an exposure and an outcome. These are followed by the observational designs, with cohort studies, case-control studies, and cross-sectional studies in descending order also providing potential evidence for a causal association between exposure and outcome. The lowest quality of evidence comes from case reports, case series and other descriptive studies. As a general rule, lower-quality studies provide less information on whether a causal relationship exists than studies of higher quality.

Although this hierarchy should not be indiscriminately applied to all research questions and studies, an epidemiologist should provide sound scientific justifications for departing from these well-established norms. For example, a poorly designed and conducted meta-analysis or randomized clinical trial may provide less evidence than a well-designed and conducted cohort or case-control study.

A number of plaintiffs' epidemiologists ignore the well-established hierarchy of evidence in their reviews of the relevant human studies, either by treating all studies equally or, even more troublingly, placing an inappropriate amount of weight on case-control studies that they claim demonstrate a weak association between talc use and ovarian cancer, while ignoring stronger, better designed cohort studies that do not show any association and also better capture the temporal nature that must exist to demonstrate a causal relationship

Nat. Health & Medical Res. Council, *NHMRC Levels of Evidence and Grades for Recommendations for Developers of Clinical Practice Guidelines* (2009).

between exposure and outcome. For example, Dr. Moorman states the following in her report:

As I evaluated individual epidemiologic studies (case-control and cohort studies) that described the risk for ovarian cancer associated with talc use, I did not weight one design more heavily than the other because there are advantages and disadvantages to each design for evaluating talc as a cause of ovarian cancer.⁷⁹

Likewise, Dr. McTiernan states in her report that "all" studies provide evidence of causal effect. When asked at her deposition about the hierarchy of scientific evidence, Dr. McTiernan testified that she was "not sure what hierarchy" the questioner was referring to and that, in any event, "depending on the question, one type of study could be preferable to another, but in general all of the studies provide information, and we look at the totality of evidence." When I teach students about study design in epidemiology, this is exactly what I tell them *not* to do. When evaluating whether causality can be demonstrated from a particular study or series of studies, it is essential to evaluate the strengths and potential weaknesses of each individual study. Because case-control studies are more easily subject to biases and confounding factors and can often not fully capture the temporal relationship between exposure and outcome, as discussed in detail below, they are often less reliable than cohort studies.

Even more problematic than treating all studies the same is plaintiffs' experts' tendency to place *more* emphasis on case-control studies than higher-quality cohort studies, despite their limitations. For example, despite her disclaimer of adherence to any hierarchy of evidence, Dr. McTiernan does apply a hierarchy of her own, suggesting that case-control studies are preferable in situations where an exposure is "very difficult to measure and which can change over time."82 While I agree with her that case-control studies are often "easier" when an exposure may be "difficult to measure," ⁸³ a poor-quality case-control study does not provide higher quality data due to limitations in design. Furthermore, casecontrol studies, as mentioned above, can be subject to bias and confounding, even when they are well designed. Even though case-control studies sometimes may be "easier" to conduct, the temporal relationship between exposure and outcome is often more difficult to establish because ascertainment of the exposure is done after the outcome. Finally, it is often extremely difficult for a case-control study design to accurately investigate an exposure that changes over time and a cohort design will more likely be able to investigate time varying exposures than a case-control study design. Dr. McTiernan's suggestion therefore is illogical, and in my opinion, is not supported by any science.

Moorman Report 10.

McTiernan Report 18.

McTiernan Deposition 118.

McTiernan Deposition 117.

⁸³ *Id*.

Dr. McTiernan has also criticized the multiple cohort studies finding no association between talc use and ovarian cancer on the ground that those studies involved an "insufficient number of cases . . . to find a statistically significant result." Dr. McTiernan's criticism seems to be that, because ovarian cancer has a low incidence rate – and so few study participants developed the disease in both the study and control populations – the studies cannot rule out the possibility of a link between talc use and ovarian cancer. This position is incorrect.

The first problem with Dr. McTiernan's criticism is that her focus on the low overall incidence of ovarian cancer in the population is misplaced. Incidence rates reported by the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program are estimated rates for *all* women. These rates may change from year to year, and rates may be different for different age groups and races as reported by SEER. Deservational studies do not study the population at large, but rather a subset of the population (i.e., study participants). And the incidence of ovarian cancer in the population enrolled in the cohort studies, including Gonzalez (2016) (41,654 women), Houghton (2014) (61,576 women), and Gates (2010)/Gertig (2000) (108,870 women), was higher than in the general population, with 429 cases among 68,435 participants who reported exposure to talc, and 943 cases among 141,345 participants who reported no exposure to talc. It is not surprising that the incidence rates of ovarian cancer in the cohort studies are much higher than the reported rates for all females by the SEER Program because the cohort studies may include women who are in general at higher risk of developing ovarian cancer (i.e., older age, family history of cancer etc.).

A higher incidence of disease in the study population means that the number of participants needed to detect true risk is decreased – i.e., smaller sample sizes can detect the same amount of risk. Thus, because the cohort studies involve women who likely have a higher risk of ovarian cancer than the general population as reported by SEER, the study sample sizes needed to detect a given difference in risk between groups will be smaller. (This is why epidemiologists study higher-risk groups for less-common disease.) Specifically, using the Berge study's meta-analysis of cohort studies, ⁸⁹ which concluded that combined cohort studies yielded no increased risk of ovarian cancer when comparing participants exposed to talc to participants not exposed to talc (RR: 1.02; 95% CI: 0.85-1.20), I calculated that the incidence of ovarian cancer and the overall number of study participants was sufficient to detect a true risk of ovarian cancer of 1.25 with a power of .99. ⁹⁰ In other words, there would be a 1% chance of being incorrect and concluding that there is no difference in risk of ovarian cancer between participants exposed and unexposed to talc if there was a true increase in risk of ovarian cancer with talc exposure.

McTiernan Deposition 124.

https://seer.cancer.gov/statfacts/html/ovary.html.

⁸⁶ Gonzalez (2016).

⁸⁷ Houghton (2014).

Gates (2010); Gertig et al., *Prospective Study of Talc Use and Ovarian Cancer*. (2000) 92 J. Nat. Cancer Inst. 249.

⁸⁹ Berge 2018.

Calculations performed with STATA SE 15.1, StataCorp, College Station, TX.

Dr. Moorman's power-based criticisms are similarly flawed. She relies on commentary by Narod, ⁹¹ who states that "the lack of a significant overall association between ever use of talc and ovarian cancer in the cohort studies may be due to the fact that despite the large size of the cohorts, the studies were not adequately powered to detect a relative risk of approximately 1.2." But this commentary rests on sample size calculations with certain assumptions regarding risk of ovarian cancer, including the same incidence rate issue that undermines Dr. McTiernan's critique. When the actual incidence rate of ovarian cancer in the cohort studies is taken into account, it decreases the study sample size needed to the sample sizes reported in the relevant cohort studies.

Relatedly, the fact that so few participants in Gonzalez (2016), ⁹² Houghton (2014), ⁹³ and Gates (2010)/Gertig (2000), ⁹⁴ developed ovarian cancer regardless of their talc exposure does not undermine the validity of these studies. To the contrary, it demonstrates that the risk of developing ovarian cancer is small among the higher-risk populations that were studied, and that talc exposure simply does not increase that risk to a statistically significant degree.

Other plaintiffs' experts have criticized cohort studies on the grounds that they do not sufficiently account for the latency period of ovarian cancer. For example, Dr. Siemiatycki has stated that the "short follow-up periods in cohort studies would be a source of bias."95 According to Dr. Siemiatycki, because cohort study researchers "collect information about exposure, and then follow [patients] for two years to find out how many of them got cancer, and whether there is a difference between the people who were exposed and the people who are not exposed, well, that would be pretty hopeless because it takes more than two years for cancers to develop and be diagnosed."96 But this supposed limitation on cohort studies is greatly exaggerated. Houghton (2014) asked about talcum powder use in study participants who had been followed for up to 18 years and found no statistically significant increased risk in ovarian cancer. 97 Gates (2010) added to the Gertig (2000) cohort and followed study participants for up to 24 years and found no statistically significant elevations in risk for talc use for all epithelial ovarian cancers. 98 Similarly, Gonzalez (2016) followed participants with a sister or half-sister with a history of breast cancer for a median 6.5 years and found no association between the use of talc and ovarian cancer. 99 In any event, the women followed in all of these studies presumably did not start

Narod, *Talc and ovarian cancer*. (2016) 141 Gynecol. Oncol. 410. Plaintiffs' experts Drs. Ellen Blair Smith and Judith Wolf place similar reliance on Narod's commentary on the power of cohort studies to detect risk. (Blair Smith Rep. at 20; Wolf Rep. at 6.)

⁹² Gonzalez (2016).

⁹³ Houghton (2014).

Gates (2010); Gertig et al., *Prospective Study of Talc Use and Ovarian Cancer*. (2000) 92 J. Nat. Cancer Inst. 249.

⁹⁵ Siemiatycki Deposition 171.

⁹⁶ *Id*.

Houghton (2014).

⁹⁸ Gates (2010); Gertig (2000).

⁹⁹ Gonzalez (2016).

using talc for the first time the day the studies began and therefore would have had longer durations of use than the time period of the study – in most cases many years more.

B. Ignoring Or Minimizing The Effects Of Recall Bias And Other Biases In Case-Control Studies

Recall bias is of particular concern in retrospective case-control studies because, as compared to controls, cases "tend to search their memories to identify what might have caused their disease; healthy controls have no such motivation." This, in turn, tends to artificially increase the supposed effect of the exposure. As Vetter and Mascha point out, a number of factors can affect recall bias. 101 Study participants with a particular disease tend to "search their memories to identify what might have caused their disease," whereas "healthy controls have no such motivation." Cases tend to remember past exposures more than controls, and cases are often more likely than controls to investigate whether certain risk factors increase the risk of developing a certain disease. In addition, individuals with a disease may have greater awareness of potential risk factors for their condition or may have become sensitized by repeated physician interviews. Consider again the previous example of the investigator who is trying to determine if there is a relationship between sugary drinks and high blood pressure. If the cases tend to recall and report more sugary drink consumption simply because they have reflected more on their past experiences, recall bias could result in differential misclassification and a false overestimation of the measure of risk between the sugary drinks and high blood pressure. Because cases and controls have different incentives to recall past exposures, recall bias can lead to finding associations between exposures and diseases that do not exist. As I explained earlier, the Schildkraut case-control study demonstrates an excellent example of the effect of recall bias in assessing the effects of genital talc use before and after the year 2014. Dr. Singh attempts to minimize this finding because "there was a statistically significant increased risk both before and after 2014." This is incorrect, as there is only a statistically significant association between any genital body powder use and ovarian cancer in interviews conducted after 2014, providing an exceptional real-world example of the possibility of recall bias in a case-control epidemiologic study. Likewise, Dr. McTiernan asserts that recall bias is "unlikely" to be an issue because the studies for which data collection pre-dated news reports of this association showed similar effects to those for which data were collected afterward. 104 However, there is no reason to believe that recall bias did not affect cases reporting perineal talc use before 2014, since there were reports of an association in the medical literature (and presumably, the media) prior to that time – and the tendency in a case-control study for cases to remember past exposures more than controls is an issue that affects case-control studies regardless of date.

Grimes & Schultz, *Bias and causal associations in observational research*. (2002) 259(9302) Lancet 248.

Vetter & Mascha, *Bias, Confounding, and Interaction: Lions and Tigers, and Bears, Oh My!*. (2017) 125(3) Anesth Analg 1042.

Grimes & Schultz (2002).

Singh Report 45-46.

McTiernan Report 24.

Dr. Siemiatycki also states that if recall bias were present, "we would systematically see elevated RRs from case-control studies for all manner of variables in all kinds of studies." This makes little epidemiologic sense, as recall bias is a known particular concern in retrospective studies that use a case-control design to investigate the association between exposure and outcome. 106

C. Jumping To Causation Without Sufficiently Determining Association

Epidemiologists and other researchers are often asked to determine whether an exposure can cause an illness. As noted above, the Bradford Hill factors supply the commonly used framework for undertaking such an analysis. But as also noted above, the existence of a clear-cut, statistically significant association is a prerequisite to such an analysis. One needs to find an association between exposure and outcome first, and it is not acceptable epidemiologic methodology to apply the Bradford Hill criteria in the absence of an established association.

Plaintiffs' experts have the opinion that "most" or the "vast majority" of the epidemiological studies show an increased relative risk of ovarian cancer for genital talc users. For example:

Dr. Moorman states that, "among the more than two dozen studies that have reported on the association between talc use and ovarian cancer, the vast majority of them reported relative risks or odds ratios greater than one[.]" 107

Dr. Singh concludes that "[m]ost case control studies demonstrate an increased risk factor of ovarian cancer associated with talc use with an OR between 1.3 and 1.6, even after adjusting for various risk factors." ¹⁰⁸

Dr. Smith-Bindman pronounces that her "review of case-control studies on talcum powder use and ovarian cancer risk were consistent and indicate a 50% increase in risk of serous invasive cancer related to routine talcum powder exposure compared to no exposure." ¹⁰⁹

The table in Section VII demonstrates that none of the hospital-based case-control studies, none of the cohort studies, and nearly half of the population-based case-control studies found no statistically significant association. Given that the association found in the literature is far from "perfectly clear-cut," it is not clear to me that a Bradford Hill analysis is even appropriate in this situation.

Siemiatycki Report 54.

¹⁰⁶ Schultz & Grimes (2002).

Moorman Report 15.

Singh Report 53.

Smith-Bindman Report 34 (emphasis omitted).

D. Methodological Problems With Dr. Smith-Bindman's Meta-Analysis

One of plaintiffs' epidemiologists, Dr. Smith-Bindman, conducted her own, new meta-analysis of a portion of the talc literature for purposes of this litigation. There are significant problems with her approach that render it unreliable. The first is that the rationale for a new non-peer-reviewed meta-analysis – in an area that has already been subject to repeated meta-analyses on substantially the same body of literature – is not clearly stated. "Although this subject has hardly been studied, repeating or updating rarely (9%) leads to changes in the pooled results of meta-analyses." Therefore, while repeated meta-analyses should not be "discouraged a priori," an "important question" is the "rationale for repeating the analysis" and, where the results differ from prior studies, another important question is "how [the] authors defend their conclusions in relation to prior studies."¹¹¹ Dr. Smith-Bindman does not adequately do this; nor does she subject this new meta-analysis to any form of peer review – one of the cornerstones of the body of evidence contained in the medical literature. Under a section of her report that is supposed to set forth a "rationale" for her new meta-analysis, she fails to explain the methodological shortcomings of prior meta-analyses. 112 Instead, she asserts that she believes that "the most important research question to answer in this review is whether regular exposure to talcum powder is associated with ovarian cancer" – and serous cancer particularly – and thus that her review should be limited to those studies that supply data for "as close to approximately daily" use of talcum powder as possible. 113 But she does not explain why daily use is the right metric. Nor, in any event, does she actually limit her review to daily use, which, as she acknowledges, is not specifically examined in all of the studies she included in her review; and at the same time, she also excluded studies that did address daily use based on her own (unexplained) assessment that their "research methods were poorly defined." ¹¹⁴

Dr. Smith-Bindman reports an odds ratio of 1.43 for all ovarian cancers that is somewhat higher than prior meta-analyses, ¹¹⁵ and ultimately that the association is indicative of a causal relationship. ¹¹⁶ She does not explain why these results might be more valid and defensible in relation to prior meta-analyses, which report somewhat lower odds ratios and reach the opposite conclusion on causation. The sum total of her discussion on this is that "[t]he existing systematic reviews (in particular Penninkilampi and Berge) also concluded a significant increase in ovarian cancer risk following talcum powder exposure," ¹¹⁷ but she fails to acknowledge that the odds ratios were lower and that neither study embraced a causal conclusion in its review of the overall scientific literature. This omission is critical. Scientists do not practice in a vacuum; they must take into account the

Vavken & Dorotka, A Systematic Review of Conflicting Meta-Analyses in Orthopaedic Surgery. (2009) 467(10) Clin Orthop Relat Res. 2723.

¹¹¹ *Id*.

Smith-Bindman Report 30.

¹¹³ *Id.* at 31.

¹¹⁴ *Id.* at 32.

¹¹⁵ *Id.* at 33.

¹¹⁶ *Id.* at 41.

¹¹⁷ *Id.* at 34.

entire existing body of scientific evidence. Dr. Smith-Bindman's failure to do so in any meaningful sense, as well as her failure to state the fact that there are no studies that investigated a standardized dose of talc, a standardized method of exposure to talc, or a validated assessment of the frequency and duration of talc usage, makes this a pointless exercise. Because of these fundamental flaws in her study, there is no valid basis to accept her unique perspective over the body of work of many other investigators over several decades that has reached the opposite conclusion.

A second problem with Dr. Smith-Bindman's approach concerns her treatment of serous ovarian cancer specifically. Dr. Smith-Bindman claims to have found data concerning serous ovarian cancer specifically from four studies. But such post-hoc analyses are often speculative because identifying subgroups after the fact can be subject to problems associated with confounding. Therefore, while these analyses may be hypothesisgenerating, caution is advised in interpreting the results. For instance, if weight, socioeconomic status, race or douching each were causally related to the risk of serous ovarian cancer and also related to the use of talc but were not investigated in the post-hoc analysis because the study was not designed to look at these factors, then investigators may conclude there is an association when one does not in reality exist between talc use and serous ovarian cancer.

Identifying subgroups after the fact is also inherently prone to bias because of the investigator's impressions of the results of the study. Essentially, it allows the researcher to start with a conclusion and work backwards, which is exactly the opposite of the scientific method. And even setting aside the bias concerns in such a backwards endeavor, findings from post-hoc analyses may also be spurious because the study was not designed to address questions that are developed post-hoc, and thus, for example, no effort would have been made to match cases and controls within the subgroup.

Dr. Smith-Bindman's meta-analysis has other methodological flaws as well. For instance, Dr. Smith-Bindman stated that she alone performed "the search, according – obtaining all the papers, and then reviewing the bibliography of all those papers." Most meta-analyses of higher quality involve more than one investigator to perform the search to decide what studies to include and what studies not to include in order to avoid bias. This was not done. She also states that Dr. Hall helped her with "abstracting the data as a second set of eyes and in doing the statistical summary." Based on her deposition, there also appear to be discrepancies between the numbers reported in Dr. Smith-Bindman's meta-analysis and those from the published literature, and she testified that she "was struggling to understand why the numbers and the figures were not exactly the same as the ones . . . in the published manuscript." Dr. Smith-Bindman, as she stated in her

¹¹⁸ Id

Wang et al., Statistics in Medicine – Reporting of Subgroup Analyses in Clinical Trials. (2007) 357(21) N Engl J Med 2189.

Smith-Bindman Deposition (Vol. I) 101.

Id.

¹²² *Id*.

Smith-Bindman Deposition (Vol. II) 255-56.

deposition, called Dr. Hall in between the first and second part of her deposition to ask Dr. Hall "to clarify how she did the calculations of the numbers that are shown in the figures." These irregularities further call her meta-analysis into question.

E. Methodological Errors In Plaintiffs' Epidemiologists' Bradford Hill Analyses

Once an association has been established, Bradford Hill set forth a framework to help assess whether a causal relationship exists: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimentation, and analogy. To the extent a Bradford Hill analysis is even called for, plaintiffs' experts took an irregular approach that seems to be results-driven. In my discussion below, I focus on three criteria – strength of association, consistency of association and biologic gradient – that are the most relevant to my opinions and experience as an epidemiologist.

1. Plaintiffs' epidemiologists find a "strong" association where there is none.

Strength of association measures the level of increased risk of developing a particular disease as a result of exposure to a particular substance. Strength of association is typically measured by calculating an odds ratio or relative risk - i.e., the ratio of the risk of disease in the population exposed to the risk of disease in those unexposed. A relative risk of 1.0 would indicate that there is no difference in disease risk between individuals exposed and those who are not. When the risk is low, epidemiologists typically require other strong evidence of causation.

Although there is no universal numeric definition of a "strong" association between exposure and outcome in terms of risk, it is generally accepted that ratios of risk measures between 1.1 and 2.0 represent a weak association between exposure and outcome in part because other factors (bias, confounding and random error) have the potential to explain away an apparent association of that level. ¹²⁵ One after another, plaintiffs' epidemiologists mischaracterize the – at best – weak association between talc use and ovarian cancer as one that is strong. For example:

Dr. Siemiatycki states that "[such] a high and significant [relative risk] could not have occurred by chance." 126

Dr. Singh writes that he "place[s] significant weight on the fact that studies demonstrate *a strong association* between talcum powder use and ovarian cancer[.]" 127

Dr. Moorman concludes that, "[t]aken as a whole, the *overwhelming statistical strength of these studies*, whose results are replicated over decades across a wide

¹²⁴ *Id.* 255.

Wynder et al., Radford Conference Report: Weak associations in epidemiology and their interpretation (3rd ed.). (1982) 11 Prev. Med. 464.

Siemiatycki Report 63 (emphasis added).

Singh Report 63 (emphasis added).

variety of populations and investigators, further supported by consistent metaanalysis, weighs very heavily in favor of a causal inference."¹²⁸

In his own non-peer-reviewed meta-analysis, Dr. Siemiatycki calculated the relative risk as 1.28. While I agree with Dr. Siemiatycki that a summary relative risk of 1.28, in general, represents that an exposed group has a 28% increased risk of an outcome, a relative risk in this range is weak, and may well result from bias, confounding, and/or random error rather than a true causal relationship. There is simply no disagreement about this within the scientific community. Plaintiffs' experts' insistence that a 1.28 relative risk is "high" raises the concern that they are pursuing a results-driven approach to their causation analysis instead of proper scientific methodology.

Furthermore, Dr. Siemiatycki states that "the statistical significance of individual studies is irrelevant to the consideration of causality; it is the totality of evidence embodied in the meta-analysis that counts." This might be something to consider in an ideal setting where multiple studies exist to evaluate the effect of a certain exposure that had the same design, the same conduct and the same analysis. But in this instance, in evaluating the effect of talc exposure on the risk of ovarian cancer, one cannot simply ignore the results of individual studies by lumping them together, especially when the individual studies were very different in terms of design, conduct, and analysis.

2. Plaintiffs' experts fabricate consistency by ignoring inconsistent studies.

Plaintiffs' experts uniformly assert that the consistency criterion has been satisfied. Dr. Singh states, for example, that "the direction and strength of association of talc and ovarian cancer is generally consistent across studies." ¹³⁰ Dr. McTiernan likewise concludes that "the association between use of talcum powder products and risk of ovarian cancer was highly consistent."¹³¹ I would agree with plaintiffs' experts that there are some consistencies among the studies, but those consistencies are among hospital-based casecontrol studies and among large cohort studies showing no statistically significant association between talc exposure and ovarian cancer. By contrast, there are inconsistencies between hospital-based and population-based case-control studies and within population-based case-control studies. As mentioned above, there are seven hospital-based case-control studies that demonstrate no statistically significant association between talc exposure and risk of ovarian cancer, while there are 26 population-based casecontrol studies that show inconsistent results, with some studies demonstrating a significant effect of talc exposure on risk of ovarian cancer and others showing no significant effect of talc exposure on risk of ovarian cancer. In addition, there are four cohort studies that also demonstrate no statistically significant association between talc exposure and risk of ovarian cancer. This lack of consistency both within and between study designs suggests that any association may result from bias, confounding, and/or random error, and therefore weighs against a causal relationship.

Moorman Report 29 (emphasis added).

Siemiatycki Report 63.

Singh Report 63.

McTiernan Report 64.

Moreover, it is important to remember (contrary to the suggestion of several of plaintiffs' experts) that for this criterion to weigh in favor of finding a causal relationship, there must be a consistency in *statistically significant* associations. Consistency in relative risks that are not statistically significant is not meaningful because that sort of consistency does not provide any degree of confidence that the claim of association made by the study is more than random chance.

3. Plaintiffs' experts claim there is a dose-response where none exists.

A causal association is far more likely if there is demonstrated biological gradient – i.e., a dose-response such that a greater dose leads to a greater risk of disease incidence rate. Almost every epidemiological study has failed to show any dose-response relationship between genital talc use and ovarian cancer as described above. ¹³² Indeed, plaintiffs' own expert Dr. Siemiatycki acknowledged in 2008 that "[t]he main epidemiological evidence against the association [between talc use and ovarian cancer] is the absence of clear exposure-response associations in most studies[.]"

In responding to this scientific consensus, plaintiffs' epidemiologists insist that the literature supports a finding of a dose-response relationship. For example, Dr. Siemiatycki has the opinion that "there is a clear indication of increasing risk with increasing cumulative exposure" in the Terry 2013 and Schildkraut 2016 studies. ¹³⁴ But the Terry study – which Dr. Siemiatycki calls "the most important piece of evidence we have on dose-response" 135 – "observed no significant trend . . . in risk with increasing number of lifetime applications."136 A significant trend was found in that study only when non-users were included in the analysis. Including individuals who are not exposed to a substance in calculating a dose-response trend is inappropriate, however, because it renders this criterion redundant of the strength-of-association inquiry. Dr. Siemiatycki dismissed the fact that the p-value for the trend is not statistically significant by suggesting that "the absence of statistical significance of the trend among the four exposed subsets is not equivalent to the demonstration of an absence of dose-response." That is pure speculation; if the trend line cannot be shown to be statistically significant, then there is no way to tell whether an actual relationship exists. The Schildkraut study likewise only included findings on the difference in risk between, in essence, never-users and ever-users of talc, and its analysis is therefore not relevant to a dose-response relationship.

Indeed, determining the dose of talc exposure is problematic. As Dr. Moorman acknowledges, the relevant dose of talc is not the amount applied but the amount, if any,

Nat. Cancer Inst., *Ovarian, Fallopian Tube, and Primary Peritoneal Cancer Prevention (PDQ)* – *Health Professional Version*, https://www.cancer.gov/types/ovarian/hp/ovarian-prevention-pdq#link/_220_toc (last updated Jan. 4, 2019); Gonzalez (2016); Houghton (2014); Gates (2010).

¹³³ Langseth (2008).

Siemiatycki Report 63.

Id. at 45.

¹³⁶ Terry (2013).

Siemiatycki Report 44.

that actually reaches the ovaries. ¹³⁸ However, there is no validated method of evaluating the amount applied, let alone how much (if any) reaches the ovaries. As previously discussed, asking a woman how much talc she powdered on to the underwear is not something that can be objectively measured. Instead, it is inherently subjective and prone to inaccurate estimation. As also discussed above, this creates the potential for recall, reporting, and measurement bias, all of which can lead to false conclusions based on the results. For all of these reasons, the potential for inaccurate classification of exposure leads to tremendous limitations in the entire body of relevant literature, limiting the ability to conclude that there is a causal relationship between talc exposure and ovarian cancer.

IX. SUMMARY AND CONCLUSIONS ASSESSING CAUSALITY

In designing an epidemiological study, the goal of a scientist is to derive findings that represent the truth in the population being studied. In this respect, choosing a study design that minimizes or eliminates the effects of bias and confounding is very important. In the context of assessing whether epidemiological studies indicate an association between genital talc use and ovarian cancer, recall bias is of particular concern among case-control studies and has demonstrably affected findings of association.

The methodologies used by plaintiffs' experts ignore fundamental principles of epidemiology. In particular, plaintiffs' experts ignore the hierarchy of evidence in evaluating studies and rely on study designs that are inherently susceptible to bias. Specifically, plaintiffs' experts pay particular attention to criticizing cohort studies, with little acknowledgment of the limitations in the case-control studies that find weak associations.

Plaintiffs' experts generally agree that even the studies that do show an association between talc use and ovarian cancer have found a relative risk in the range of 1.2-1.6. This, by definition, is a weak association. Plaintiffs' epidemiologists nonetheless characterize the association as "strong." Likewise, plaintiffs' epidemiologists try to demonstrate a doseresponse relationship by relying on methodologically flawed studies and statistically insignificant trend lines. They also see consistency where the studies are inherently inconsistent.

As a professor of medicine and of public health, I have focused my career on using the science of epidemiology as a scientific tool to help improve our understanding of health and disease. The distortion of epidemiological science for purposes of litigation does not achieve those goals. Instead, it undermines scientific efforts to better understand the etiology of disease.

When analyzed in a methodological manner, the body of medical literature simply does not support the conclusion that perineal exposure to talc causes ovarian cancer.

Moorman Report 30.

APPENDIX A

Curriculum Vitae for Academic Promotion The Johns Hopkins University School of Medicine

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Christian A. Merlo, M.D., M.P.H.

February 22, 2019

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

2006 - 2015	Assistant Professor of Medicine, Johns Hopkins University School of Medicine
2009-2015	Assistant Professor of Epidemiology, Johns Hopkins University Bloomberg School of Public Health
2010-present	Associate Program Director for Scholarship, Osler House Staff Program, Johns Hopkins University
	School of Medicine
2014-present	Director of Outpatient Services, Johns Hopkins Division of Pulmonary and Critical Care Medicine
2015-present	Associate Program Director, Adult Cystic Fibrosis Center, Johns Hopkins Cystic Fibrosis Center
2015-present	Associate Professor of Medicine, Johns Hopkins University School of Medicine
2015-present	Associate Professor of Epidemiology, Johns Hopkins University Bloomberg School of Public Health

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Education and Training

Undergraduate

1992 A.B., Biology/Visual Arts, The College of The Holy Cross, Worcester, MA, cum laude

Doctoral/graduate

1996 M.D., Georgetown University School of Medicine, Washington, DC

2003 M.P.H., Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD

Postdoctoral

Intern, Internal Medicine, Georgetown University School of Medicine, Washington, DC
 Resident, Internal Medicine, Georgetown University School of Medicine, Washington, DC
 Chief Resident, Internal Medicine, Georgetown University School of Medicine, Washington, DC
 Clinical Fellow, Division of Pulmonary & Critical Care Medicine, Johns Hopkins University School of

Medicine, Baltimore, MD

2001-2004 Research Fellow, Division of Pulmonary & Critical Care Medicine, Johns Hopkins University School of

Medicine, Baltimore, MD

Professional Experience:

1999-2000 Instructor, Georgetown University School of Medicine, Washington, DC

2003-2004	Intensivist, Virginia Hospital Center, Arlington, VA
2004-2006	Instructor, Johns Hopkins University School of Medicine, Baltimore, MD
2006-2015	Assistant Professor, Johns Hopkins University School of Medicine, Baltimore, MD
2009-2015	Assistant Professor of Epidemiology, Department of Epidemiology, JHSPH
2015-present	Associate Professor, Johns Hopkins University School of Medicine, Baltimore, MD
2015-present	Associate Professor of Epidemiology, Department of Epidemiology, JHSPH

RESEARCH ACTIVITIES

Peer Reviewed Original Science Publications

- 1. Lechtzin N, John M, Irizarry R, **Merlo C**, Diette GB, Boyle MP. Outcomes of adults with cystic fibrosis infected with antibiotic-resistant Pseudomonas aeruginosa. Respiration 2006; 73: 27-33.
- 2. Wright JM, **Merlo CA**, Reynolds JB, Zeitlin PL, Garcia JG, Guggino WB, Boyle MP. Respiratory epithelial gene expression in patients with mild and severe cystic fibrosis lung disease. Am J Respir Cell Mol Biol 2006; 35: 327-336.
- 3. Buranawuti K, Boyle MP, Cheng S, Steiner LL, McDougal K, Fallin MD, **Merlo C**, Zeitlin PL, Rosenstein BJ, Mogayzel PJ,Jr, Wang X, Cutting GR. Variants in mannose-binding lectin and tumour necrosis factor alpha affect survival in cystic fibrosis. J Med Genet 2007; 44: 209-214.
- 4. Hsu SC, Groman JD, **Merlo CA**, Naughton K, Zeitlin PL, Germain-Lee EL, Boyle MP, Cutting GR. Patients with mutations in Gsalpha have reduced activation of a downstream target in epithelial tissues due to haploinsufficiency. J Clin Endocrinol Metab 2007; 92: 3941-3948.
- 5. Kirk GD, Merlo C, O'Driscoll P, Mehta SH, Galai N, Vlahov D, Samet J, Engels EA. HIV infection is associated with an increased risk for lung cancer, independent of smoking. Clin Infect Dis 2007; 45: 103-110.
- 6. **Merlo CA**, Boyle MP, Diener-West M, Marshall BC, Goss CH, Lechtzin N. Incidence and risk factors for multiple antibiotic-resistant Pseudomonas aeruginosa in cystic fibrosis. Chest 2007; 132: 562-568.
- 7. Dasenbrook EC, **Merlo CA**, Diener-West M, Lechtzin N, Boyle MP. Persistent methicillin-resistant Staphylococcus aureus and rate of FEV1 decline in cystic fibrosis. Am J Respir Crit Care Med 2008; 178: 814-821.
- 8. Allen JG, Weiss ES, **Merlo CA**, Baumgartner WA, Conte JV, Shah AS. Impact of donor-recipient race matching on survival after lung transplantation: analysis of over 11,000 patients. J Heart Lung Transplant 2009; 28: 1063-1071.
- 9. **Merlo CA**, Weiss ES, Orens JB, Borja MC, Diener-West M, Conte JV, Shah AS. Impact of U.S. Lung Allocation Score on survival after lung transplantation. J Heart Lung Transplant 2009; 28: 769-775.
- 10. Weiss ES, Allen JG, Meguid RA, Patel ND, **Merlo CA**, Orens JB, Baumgartner WA, Conte JV, Shah AS. The impact of center volume on survival in lung transplantation: an analysis of more than 10,000 cases. Ann Thorac Surg 2009; 88: 1062-1070.
- 11. Weiss ES, Allen JG, **Merlo CA**, Conte JV, Shah AS. Lung allocation score predicts survival in lung transplantation patients with pulmonary fibrosis. Ann Thorac Surg 2009; 88: 1757-1764.
- Weiss ES, Allen JG, **Merlo CA**, Conte JV, Shah AS. Survival after single versus bilateral lung transplantation for high-risk patients with pulmonary fibrosis. Ann Thorac Surg 2009; 88: 1616-25; discussion 1625-6.
- 13. Weiss ES, Allen JG, Modi MN, **Merlo CA**, Conte JV, Shah AS. Lung transplantation in older patients with cystic fibrosis: analysis of UNOS data. J Heart Lung Transplant 2009; 28: 135-140.
- 14. Weiss ES, **Merlo CA**, Shah AS. Impact of advanced age in lung transplantation: an analysis of United Network for Organ Sharing data. J Am Coll Surg 2009; 208: 400-409.
- 15. Allen JG, Arnaoutakis GJ, Weiss ES, **Merlo CA**, Conte JV, Shah AS. The impact of recipient body mass index on survival after lung transplantation. J Heart Lung Transplant 2010; 29: 1026-1033.
- 16. Arnaoutakis GJ, Allen JG, **Merlo CA**, Baumgartner WA, Conte JV, Shah AS. Low potassium dextran is superior to University of Wisconsin solution in high-risk lung transplant recipients. J Heart Lung Transplant 2010; 29: 1380-1387.
- 17. Dasenbrook EC, Checkley W, Merlo CA, Konstan MW, Lechtzin N, Boyle MP. Association between respiratory tract methicillin-resistant Staphylococcus aureus and survival in cystic fibrosis. JAMA 2010; 303: 2386-2392.
- 18. Drummond MB, Kirk GD, McCormack MC, Marshall MM, Ricketts EP, Mehta SH, Wise RA, **Merlo CA**. HIV and COPD: impact of risk behaviors and diseases on quality of life. Qual Life Res 2010; 19: 1295-1302.
- 19. Drummond MB, Kirk GD, Ricketts EP, McCormack MC, Hague JC, McDyer JF, Mehta SH, Engels EA, Wise RA, **Merlo CA**. Cross sectional analysis of respiratory symptoms in an injection drug user cohort: the impact of obstructive lung disease and HIV. BMC Pulm Med 2010; 10: 27-2466-10-27.
- 20. Hoag JB, Terry P, Mitchell S, Reh D, Merlo CA. An epistaxis severity score for hereditary hemorrhagic

- telangiectasia. Laryngoscope 2010; 120: 838-843.
- 21. Weiss ES, Allen JG, Merlo CA, Conte JV, Shah AS. Factors indicative of long-term survival after lung transplantation: a review of 836 10-year survivors. J Heart Lung Transplant 2010; 29: 240-246.
- 22. Allen JG, Arnaoutakis GJ, Orens JB, McDyer J, Conte JV, Shah AS, **Merlo CA**. Insurance status is an independent predictor of long-term survival after lung transplantation in the United States. J Heart Lung Transplant 2011; 30: 45-53.
- 23. Arnaoutakis GJ, Allen JG, **Merlo CA**, Sullivan BE, Baumgartner WA, Conte JV, Shah AS. Impact of the lung allocation score on resource utilization after lung transplantation in the United States. J Heart Lung Transplant 2011; 30: 14-21.
- 24. Arnaoutakis GJ, George TJ, Alejo DE, **Merlo CA**, Baumgartner WA, Cameron DE, Shah AS. Society of Thoracic Surgeons Risk Score predicts hospital charges and resource use after aortic valve replacement. J Thorac Cardiovasc Surg 2011; 142: 650-655.
- 25. Arnaoutakis GJ, George TJ, Robinson CW, Gibbs KW, Orens JB, **Merlo CA**, Shah AS. Severe acute kidney injury according to the RIFLE (risk, injury, failure, loss, end stage) criteria affects mortality in lung transplantation. J Heart Lung Transplant 2011; 30: 1161-1168.
- 26. Drummond MB, Kirk GD, Astemborski J, McCormack MC, Marshall MM, Mehta SH, Wise RA, **Merlo CA**. Prevalence and risk factors for unrecognized obstructive lung disease among urban drug users. Int J Chron Obstruct Pulmon Dis 2011; 6: 89-95.
- 27. George TJ, Arnaoutakis GJ, **Merlo CA**, Kemp CD, Baumgartner WA, Conte JV, Shah AS. Association of operative time of day with outcomes after thoracic organ transplant. JAMA 2011; 305: 2193-2199.
- 28. Marshall MM, Kirk GD, Caporaso NE, McCormack MC, **Merlo CA**, Hague JC, Mehta SH, Engels EA. Tobacco use and nicotine dependence among HIV-infected and uninfected injection drug users. Addict Behav 2011; 36: 61- 67.
- 29. Sheridan MB, Hefferon TW, Wang N, **Merlo C**, Milla C, Borowitz D, Green ED, Mogayzel PJ,Jr, Cutting GR. CFTR transcription defects in pancreatic sufficient cystic fibrosis patients with only one mutation in the coding region of CFTR. J Med Genet 2011; 48: 235-241.
- 30. Tam V, Arnaoutakis GJ, George TJ, Russell SD, **Merlo CA**, Conte JV, Baumgartner WA, Shah AS. Marital status improves survival after orthotopic heart transplantation. J Heart Lung Transplant 2011; 30: 1389-1394.
- 31. West NE, Lechtzin N, **Merlo CA**, Turowski JB, Davis ME, Ramsay MZ, Watts SL, Stenner SP, Boyle MP. Appropriate goal level for 25-hydroxyvitamin D in cystic fibrosis. Chest 2011; 140: 469-474.
- 32. Drummond MB, Kirk GD, Astemborski J, Marshall MM, Mehta SH, McDyer JF, Brown RH, Wise RA, **Merlo CA**. Association between obstructive lung disease and markers of HIV infection in a high-risk cohort. Thorax 2012; 67: 309-314.
- 33. Eberlein M, Arnaoutakis GJ, Yarmus L, Feller-Kopman D, Dezube R, Chahla MF, Bolukbas S, Reed RM, Klesney-Tait J, Parekh KR, **Merlo CA**, Shah AS, Orens JB, Brower RG. The effect of lung size mismatch on complications and resource utilization after bilateral lung transplantation. J Heart Lung Transplant 2012; 31: 492-500.
- 34. George TJ, Arnaoutakis GJ, Beaty CA, Pipeling MR, **Merlo CA**, Conte JV, Shah AS. Acute kidney injury increases mortality after lung transplantation. Ann Thorac Surg 2012; 94: 185-192.
- 35. George TJ, Beaty CA, Kilic A, Shah PD, **Merlo CA**, Shah AS. Outcomes and temporal trends among high-risk patients after lung transplantation in the United States. J Heart Lung Transplant 2012; 31: 1182-1191.
- 36. Kilic A, George TJ, Beaty CA, **Merlo CA**, Conte JV, Shah AS. The effect of center volume on the incidence of postoperative complications and their impact on survival after lung transplantation. J Thorac Cardiovasc Surg 2012; 144: 1502-8; discussion 1508-9.
- 37. Kilic A, **Merlo CA**, Conte JV, Shah AS. Lung transplantation in patients 70 years old or older: have outcomes changed after implementation of the lung allocation score? J Thorac Cardiovasc Surg 2012; 144: 1133-1138.
- 38. Drummond MB, **Merlo CA**, Astemborski J, Kalmin MM, Kisalu A, Mcdyer JF, Mehta SH, Brown RH, Wise RA, Kirk GD. The effect of HIV infection on longitudinal lung function decline among IDUs: a prospective cohort. AIDS 2013; 27: 1303-1311.
- 39. Eberlein M, Diehl E, Bolukbas S, **Merlo CA**, Reed RM. An oversized allograft is associated with improved survival after lung transplantation for idiopathic pulmonary arterial hypertension. J Heart Lung Transplant 2013; 32: 1172-1178.
- 40. Eberlein M, Reed RM, Bolukbas S, Parekh KR, Arnaoutakis GJ, Orens JB, Brower RG, Shah AS, Hunsicker L, **Merlo CA**. Lung size mismatch and survival after single and bilateral lung transplantation. Ann Thorac Surg 2013; 96: 457-463.
- 41. Eberlein M, Reed RM, Maidaa M, Bolukbas S, Arnaoutakis GJ, Orens JB, Brower RG, Merlo CA, Hunsicker LG.

- Donor-recipient size matching and survival after lung transplantation. A cohort study. Ann Am Thorac Soc 2013; 10: 418-425.
- 42. Kilic A, Beaty CA, **Merlo CA**, Conte JV, Shah AS. Functional status is highly predictive of outcomes after redo lung transplantation: an analysis of 390 cases in the modern era. Ann Thorac Surg 2013; 96: 1804-11; discussion 1811.
- 43. Kilic A, Shah AS, **Merlo CA**, Gourin CG, Lidor AO. Early outcomes of antireflux surgery for United States lung transplant recipients. Surg Endosc 2013; 27: 1754-1760.
- 44. Reh DD, Hur K, **Merlo CA**. Efficacy of a topical sesame/rose geranium oil compound in patients with hereditary hemorrhagic telangiectasia associated epistaxis. Laryngoscope 2013; 123: 820-822.
- 45. Yarmus L, Akulian J, Gilbert C, Illei P, Shah P, **Merlo C**, Orens J, Feller-Kopman D. Cryoprobe transbronchial lung biopsy in patients after lung transplantation: a pilot safety study. Chest 2013; 143: 621-626.
- 46. Drummond MB, Astemborski J, Lambert AA, Goldberg S, Stitzer ML, **Merlo CA**, Rand CS, Wise RA, Kirk GD. A randomized study of contingency management and spirometric lung age for motivating smoking cessation among injection drug users. BMC Public Health 2014; 14: 761-2458-14-761.
- 47. Fischer WA, Drummond MB, **Merlo CA**, Thomas DL, Brown R, Mehta SH, Wise RA, Kirk GD. Hepatitis C virus infection is not an independent risk factor for obstructive lung disease. COPD 2014; 11: 10-16.
- 48. Gashouta MA, **Merlo CA**, Pipeling MR, McDyer JF, Hayanga JW, Orens JB, Girgis RE. Serial monitoring of exhaled nitric oxide in lung transplant recipients. J Heart Lung Transplant 2014.
- 49. Hulbert A, Hooker CM, Keruly JC, Brown T, Horton K, Fishman E, Rodgers K, Lee B, Sam C, Tsai S, Weihe E, Pridham G, Drummond B, **Merlo C**, Geronimo M, Porter M, Cox S, Li D, Harline M, Teran M, Wrangle J, Mudge B, Taylor G, Kirk GD, Herman JG, Moore RD, Brown RH, Brock MV. Prospective CT screening for lung cancer in a high-risk population: HIV-positive smokers. J Thorac Oncol 2014; 9: 752-759.
- 50. Kilic A, Conte JV, Baumgartner WA, Russell SD, **Merlo CA**, Shah AS. Does recipient age impact functional outcomes of orthotopic heart transplantation? Ann Thorac Surg 2014; 97: 1636-1642.
- 51. **Merlo CA**, Yin LX, Hoag JB, Mitchell SE, Reh DD. The effects of epistaxis on health-related quality of life in patients with hereditary hemorrhagic telangiectasia. Int Forum Allergy Rhinol 2014; 4: 921-925.
- 52. Popescu I, Drummond MB, Gama L, Coon T, **Merlo CA**, Wise RA, Clements JE, Kirk GD, McDyer JF. Activation- induced cell death drives profound lung CD4(+) T-cell depletion in HIV-associated chronic obstructive pulmonary disease. Am J Respir Crit Care Med 2014; 190: 744-755.
- 53. Reh DD, Yin LX, Laaeq K, **Merlo CA**. A new endoscopic staging system for hereditary hemorrhagic telangiectasia. Int Forum Allergy Rhinol 2014; 4: 635-639.
- 54. Grimm JC, Valero V,3rd, Kilic A, Crawford TC, Conte JV, Merlo CA, Shah PD, Shah AS. Preoperative performance status impacts perioperative morbidity and mortality after lung transplantation. Ann Thorac Surg 2015; 99: 482-489.
- 55. **Merlo CA**, Clark SC, Arnaoutakis GJ, Yonan N, Thomas D, Simon A, Thompson R, Thomas H, Orens JB, Shah AS. National health care delivery systems influence lung transplant outcomes for cystic fibrosis. American Journal of Transplantation 2015; Epub March 24.
- 56. Braun AT, Dasenbrook EC, Shah AS, Orens JB, **Merlo CA**. Impact of lung allocation score on survival in cystic fibrosis lung transplant recipients. J Heart Lung Transplant. 2015; Epub Jun 11.
- 57. Grimm JC, Valero V 3rd, Kilic A, Magruder JT, **Merlo CA**, Shah PD, Shah AS. Association Between Prolonged Graft Ischemia and Primary Graft Failure or Survival Following Lung Transplantation. JAMA Surg. 2015 Jun;150(6):547-53. doi: 10.1001/jamasurg.2015.12. PubMed PMID: 25874575.
- 58. Yin LX, Reh DD, Hoag JB, Mitchell SE, Mathai SC, Robinson GM, **Merlo CA**. The minimal important difference of the epistaxis severity score in hereditary hemorrhagic telangiectasia. Laryngoscope. 2015; Epub Sep 22.
- 59. Grimm JC, Valero V 3rd, Magruder JT, Kilic A, Dungan SP, Silhan LL, Shah PD, Kim BS, **Merlo CA**, Sciortino CM, Shah AS. A novel risk score that incorporates recipient and donor variables to predict 1-year mortality in the current era of lung transplantation. J Heart Lung Transplant. 2015 Nov;34(11):1449-54. doi: 10.1016/j.healun.2015.07.001. Epub 2015 Jul 22. PubMed PMID: 26275639.
- 60. Walker-Sperling VE, **Merlo CA**, Buckheit RW 3rd, Lambert A, Tarwater P, Kirk GD, Drummond MB, Blankson JN. HIV Controller T Cells Effectively Inhibit Viral Replication in Alveolar Macrophages. AIDS Res Hum Retroviruses. 2016 Aug 2. [Epub ahead of print] PubMed PMID: 27353255.
- 61. Mock JR, Kolb TM, Illei PB, Yang SC, Lederman HM, **Merlo CA**. Bronchus-associated Lymphoid Tissue in Kabuki Syndrome with Associated Hyper-IgM Syndrome/Common Variable Immunodeficiency. Am J Respir Crit Care Med. 2016 Aug 15;194(4):514-5. doi: 10.1164/rccm.201511-2305IM. PubMed PMID: 27275756.
- 62. Popescu I, Drummond MB, Gama L, Lambert A, Hoji A, Coon T, Merlo CA, Wise RA, Keruly J, Clements JE,

- Kirk GD, McDyer JF. HIV Suppression Restores the Lung Mucosal CD4+ T-Cell Viral Immune Response and Resolves CD8+ T-Cell Alveolitis in Patients at Risk for HIV-Associated Chronic Obstructive Pulmonary Disease. J Infect Dis. 2016 Nov 15;214(10):1520-1530. Epub 2016 Sep 9. PubMed PMID: 27613775; PubMed Central PMCID: PMC5091376.
- 63. Walker-Sperling VE, Merlo CA, Buckheit RW 3rd, Lambert A, Tarwater P, Kirk GD, Drummond MB, Blankson JN. Short Communication: HIV Controller T Cells Effectively Inhibit Viral Replication in Alveolar Macrophages. AIDS Res Hum Retroviruses. 2016 Oct/Nov;32(10-11):1097-1099. Epub 2016 Aug 2. PubMed PMID: 27353255; PubMed Central PMCID: PMC5067835.
- 64. Whitehead KJ, Sautter NB, McWilliams JP, Chakinala MM, **Merlo CA**, Johnson MH, James M, Everett EM, Clancy MS, Faughnan ME, Oh SP, Olitsky SE, Pyeritz RE, Gossage JR. Effect of Topical Intranasal Therapy on Epistaxis Frequency in Patients With Hereditary Hemorrhagic Telangiectasia: A Randomized Clinical Trial. JAMA. 2016 Sep 6;316(9):943-51. doi: 10.1001/jama.2016.11724. PubMed PMID: 27599329.
- 65. Magruder JT, Crawford TC, Grimm JC, Kim B, Shah AS, Bush EL, Higgins RS, **Merlo CA**. Risk Factors for De Novo Malignancy Following Lung Transplantation. Am J Transplant. 2017 Jan;17(1):227-238. doi: 10.1111/ajt.13925. Epub 2016 Aug 25. PubMed PMID: 27321167.
- 66. Magruder JT, Shah AS, Crawford TC, Grimm JC, Kim B, Orens JB, Bush EL, Higgins RS, **Merlo CA**. Simulated Regionalization of Heart and Lung Transplantation in the United States. Am J Transplant. 2017 Feb;17(2):485-495. doi: 10.1111/ajt.13967. Epub 2016 Sep 12. PubMed PMID: 27618731.
- 67. Drummond MB, Lambert AA, Hussien AF, Lin CT, **Merlo CA**, Wise RA, Kirk GD, Brown RH. HIV Infection Is Independently Associated with Increased CT Scan Lung Density. Acad Radiol. 2017 Feb;24(2):137-145. doi: 10.1016/j.acra.2016.09.019. Epub 2016 Nov 18. PubMed PMID: 27876271; PubMed Central PMCID: PMC5237394.
- 68. Jennings MT, Dezube R, Paranjape S, West NE, Hong G, Braun A, Grant J, **Merlo CA**, Lechtzin N. An Observational Study of Outcomes and Tolerances in Patients with Cystic Fibrosis Initiated on Lumacaftor/Ivacaftor. Ann Am Thorac Soc. 2017 Apr 13. doi: 10.1513/AnnalsATS.201701-058OC. [Epub ahead of print] PubMed PMID: 28406713.
- 69. Jennings MT, Dasenbrook EC, Lechtzin N, Boyle MP, **Merlo CA**. Risk factors for persistent methicillin-resistant Staphylococcus aureus infection in cystic fibrosis. J Cyst Fibros. 2017 Apr 23. pii: S1569-1993(17)30106-6. doi: 10.1016/j.jcf.2017.04.010. [Epub ahead of print] PubMed PMID: 28446387.
- 70. Crawford TC, Grimm JC, Magruder JT, Ha J, Sciortino CM, Kim BS, Bush EL, Conte JV, Higgins RS, Shah AS, Merlo CA. Lung Transplant Mortality Is Improving in Recipients With a Lung Allocation Score in the Upper Quartile. Ann Thorac Surg. 2017 May;103(5):1607-1613. doi: 10.1016/j.athoracsur.2016.11.057. Epub 2017 Feb 21. PubMed PMID: 28223052.
- 71. Crawford TC, Magruder JT, Grimm JC, Suarez-Pierre A, Zhou X, Ha JS, Higgins RS, Broderick SR, Orens JB, Shah P, **Merlo CA**, Kim BS, Bush EL. Impaired Renal Function Should Not Be a Barrier to Transplantation in Patients With Cystic Fibrosis. Ann Thorac Surg. 2017 Aug 16. pii: S0003-4975(17)30707-5. doi: 10.1016/j.athoracsur.2017.05.032. [Epub ahead of print] PubMed PMID: 28822537.
- 72. Reed RM, Cabral HJ, Dransfield MT, Eberlein M, Merlo CA, Mulligan MJ, Netzer G, Sanchez PG, Scharf SM, Sin DD, Celli BR. Survival of Lung Transplant Candidates With COPD: BODE Score Reconsidered. Chest. 2018 Mar;153(3):697-701.
- 73. Orens JB, Merlo CA. Selection of Candidates for Lung Transplantation and Controversial Issues. Semin Respir Crit Care Med. 2018 Apr;39(2):117-125.
- 74. Crawford TC, Lui C, Magruder JT, Ha JS, Higgins RS, Merlo CA, Kim BS, Bush EL. Five-year mortality hazard is reduced in chronic obstructive pulmonary disease patients receiving double- versus single-lung transplants. J Surg Res. 2018 Jun 2.
- 75. Hong G, Psoter KJ, Jennings MT, Merlo CA, Boyle MP, Hadjiliadis D, Kawut SM, Lechtzin N. Risk factors for persistent Aspergillus respiratory isolation in cystic fibrosis. J Cyst Fibros. 2018 Sep;17(5):624-630.
- 76. Crawford TC, Lui C, Magruder JT, Suarez-Pierre A, Ha JS, Higgins RS, Broderick SR, Merlo CA, Kim BS, Bush EL. Traumatically Brain-Injured Donors and the Impact on Lung Transplantation Survival. Ann Thorac Surg. 2018 Sep;106(3):842-847.
- 77. Hsu J, Krishnan A, Lin CT, Shah PD, Broderick SR, Higgins RSD, Merlo CA, Bush EL.Sarcopenia of the Psoas Muscles is Associated with Poor Outcomes Following Lung Transplantation. Ann Thorac Surg. 2018 Nov 14;.
- 78. Sharma N, Evans TA, Pellicore MJ, Davis E, Aksit MA, McCague AF, Joynt AT, Lu Z, Han ST, Anzmann AF, Lam AN, Thaxton A, West N, Merlo C, Gottschalk LB, Raraigh KS, Sosnay PR, Cotton CU, Cutting GR. Capitalizing on the heterogeneous effects of CFTR nonsense and frameshift variants to inform therapeutic strategy for cystic fibrosis. PLoS Genet. 2018 Nov;14(11):e1007723.

79. Fraser CD 3rd, Zhou X, Grimm JC, Suarez-Pierre A, Crawford TC, Lui C, Bush EL, Hibino N, Jacobs ML, Vricella LA, Merlo C. Size Mismatching Increases Mortality Following Lung Transplantation in Pre-Adolescent Patients. Ann Thorac Surg. 2019 Feb 11;.

Invited Reviews

- Merlo CA, Boyle MP. Modifier genes in cystic fibrosis lung disease. J Lab Clin Med 2003;141:237-41.
- 2. **Merlo CA**, Orens JB. Candidate selection, overall results, and choosing the right operation. Semin Respir Crit Care Med 2010;31:99-107.
- 3. Braun AT, Merlo CA. Cystic fibrosis lung transplantation. Curr Opin Pulm Med 2011;17:467-72.
- 4. Kirk GD, **Merlo CA**, For the Lung HIV Study Group. HIV infection in the etiology of lung cancer: confounding, causality, and consequences. Proc Am Thorac Soc 2011;8:326-32.
- 5. Lambert AA, **Merlo CA**, Kirk GD. Human immunodeficiency virus-associated lung malignancies. Clin Chest Med 2013;34:255-72.

Inventions, Patents, Copyrights

2010 **Merlo CA**, Reh DR, Hoag JB. Method and severity scale for measuring epistaxis among patients with hereditary hemorrhagic telangiectasia (HHT). Used worldwide as a primary outcome in HHT interventional clinical trials.

Extramural Sponsorship (current, pending, previous)

Current Grants

09/26/13 – 07/31/18 Immune Mechanisms of HIV-associated COPD

U01HL121814

NIH \$505,539

PI: Gregory Kirk, MD PhD (Johns Hopkins School of Public Health)

Role: Co-I

0.60 calendar months

This proposal directly addresses critical gaps in our understanding of the clinical spectrum and consequences of HIV-associated COPD and will identify key biologic mechanisms contributing to the disease. Findings will inform the clinical management and development of interventions targeting HIV associated COPD, and may also inform broader strategies for COPD in non-HIV infected populations.

07/01/14 - 06/30/19

Clinical Risk Factors for Primary Graft Dysfunction

R01HL087115 NIH subaward \$19,984

PI: Jason Christie, MD (University of Pennsylvania)

Role: Co-I

0.12 calendar months

The major goal of this multicenter study is to define risk factors for the development of primary graft dysfunction following lung transplantation.

09/01/14 - 08/31/18

Predictors, consequences and mechanisms of accelerated lung aging in HIV

R01HL126549

NIH \$499,997

PI: Gregory Kirk, MD PhD (Johns Hopkins School of Public Health)

Role: Co-I

0.60 calendar months

The goal of this program is to establish risk factors, associated co-morbidities, and immunologic and inflammatory biomarkers associated with accelerated decline in lung function in the SHIELD cohort of HIV-positive inner-city intravenous drug users.

07/01/15 - 06/30/18

Transition of Care for Patients with Cystic Fibrosis who Undergo Lung Transplantation

Spruance Foundation II Discovery Fund

\$300,000

PI: Christian Merlo, MD MPH

2.4 calendar months

The major goal of this proposal is to identify factors which may help to improve the process of lung transplantation for patients with cystic fibrosis.

Previous

07/01/03 - 06/30/04

Gene Expression Analysis of Nasal Respiratory Epithelial Cells in ΔF508/ΔF508

Individuals with Mild and Severe Cystic Fibrosis Lung Disease

Bauernschmidt Fellowship in Pulmonary Disease

Eudowood Foundation

\$35000 Role: PI

The goal of this study was to evaluate differences in gene expression between patients

with cystic fibrosis with mild and severe lung disease.

07/01/04 - 06/30/07

The Effect of Multiple Antibiotic Resistant Pseudomonas aeruginosa on Outcomes in Cystic

<u>Fibrosis</u>

The Harry Shwachman Clinical Investigator Award

Cystic Fibrosis Foundation

\$270000 Role: PI

6.0 calendar months

The goal of this study was to evaluate the impact of multiple antibiotic resistant *Pseudomonas aeruginosa* (MARPA) on outcomes among patients with cystic fibrosis.

07/01/06 - 06/30/07

Emphysema and HIV infection within the ALIVE cohort in Baltimore

Thomas and Carol McCann Innovative research Fund for Asthma and Respiratory

Disease \$35000 Role: Co-PI

The main goal of this study was to evaluate the association between emphysema and

HIV infection among the ALIVE cohort in Baltimore.

01/01/08 - 12/30/12

The Study of HIV Infection in the Etiology of Lung Disease (SHIELD)

RFAHL07008

NIH \$549,598

PI: Gregory Kirk, MD PhD (Johns Hopkins School of Public Health)

Role: Co-PI

0.60 calendar months

06/01/11 - 02/28/15

North American Study of Epistaxis in HHT (NOSE)

Hereditary Hemorrhagic Telangiectasia Foundation

\$11,126 Role: site PI

0.12 calendar months

This was a multicenter randomized placebo-controlled trial comparing bevacizumab, estrogen, tranexamic acid, and placebo in patients with HHT-related epistaxis.

09/06/12 - 06/30/14

Using mHealth to Respond Early to Acute Exacerbations of COPD in HIV mREACH

R34HL117349

NIH \$376,291

PI: Gregory Kirk, MD PhD (Johns Hopkins School of Public Health)

Role: Co-I

0.60 calendar months

This clinical trial planning grant evaluated the feasibility, acceptability and defined optimal trial elements for an m-Health intervention to identify early exacerbations in HIV-COPD to improve management and clinical outcomes.

Research Program Building / Leadership:

2010-present

Associate Program Director for Scholarship, Osler Residency Program, Johns Hopkins University School of Medicine. In my capacity, I am responsible for the research experience for the Osler House Staff thoughout residency training. This involves one on one meetings to discuss research interests and goals, an online lecture series providing an introduction to research, pairing with faculty mentors, mentorship in the presentation of research projects at local and national meetings, collecting data highlighting scholarly activity, and reporting these data to the Director for internal use as well as for ACGME purposes.

2010-present

Director of Research, The Johns Hopkins Lung Transplant Program. In my capacity, I am responsible for coordination of research efforts within the lung transplant program. This involves multidisciplinary projects spanning across many disciplines (Medicine, Surgery, Rehabilitation, Psychology, Epidemiology) as well as across different levels of training from faculty, fellows, residents, and medical students.

2010-2018

Director, Hereditary Hemorrhagic Telangiectasia Center of Excellence. In my capacity, I am responsible for the coordination of multicenter clinical trials as well as local investigations among patients with HHT. Our center was responsible for creation of an epistaxis severity score (HHT-ESS), the first objective measure of epistaxis severity, now used worldwide clinically as well as an outcome measure in HHT clinical investigations.

2016-present

Associate Director, The Johns Hopkins Adult Cystic Fibrosis Program. In my capacity, I am responsible for the coordination of aspects of clinical and research coordination for our cystic fibrosis program.

2016-present

Director of Research, The Johns Hopkins Adult Cystic Fibrosis Program. In my capacity, I am responsible for coordination of research efforts within the Adult CF program. This involves multidisciplinary projects spanning across many disciplines (Medicine, Surgery, Psychology, Epidemiology) as well as across different levels of training from faculty, fellows, residents, and medical students.

EDUCATIONAL ACTIVITIES

Educational Publications

Peer-reviewed, original, educational publications - None

Review Articles - None

Editorials - None

Case Reports

- 1. **Merlo CA**, Studer SM, Conte JV, Yang SC, Sonnett J, Orens JB. The course of neurofibromatosis type 1 on immunosuppression after lung transplantation: report of 2 cases. J Heart Lung Transplant 2004; 23: 774-776.
- 2. Houston B, Reiss KA, Merlo C. Healthy, but comatose. Am J Med 2011; 124: 303-305.

Book and Book Chapters

- 1. **Merlo CA**, Boyle MP. "Adult Cystic Fibrosis". In The Osler Medical Handbook. Mosby. Philadelphia: 60, 899-911, 2003.
- 2. **Merlo CA**, Terry PB. Concise Review: Diagnosis and management of pulmonary arteriovenous malformations. In Harrison's Online. 2002. http://www.harrisonsonline.com.
- 3. **Merlo CA**, Hansel N. "Have a working knowledge of EMTALA laws as they apply to the ICU. How to be a good referring and accepting ICU physician". In Avoiding Common ICU Errors. Lippincott. 2008.
- 4. **Merlo CA**. Critical Care Medicine. In First Aid for the Internal Medicine Boards. McGraw-Hill. New York: 16, 123-132, 2010.

- 5. **Merlo CA.** Pulmonary Medicine. In First Aid for the Internal Medicine Boards. McGraw-Hill. New York: 4, 553-580, 2010.
- 6. Dasenbrook EC, Merlo CA. "Cystic Fibrosis and Bronchiectasis". In Lung Transplantation. Informa. 2010.
- 7. Hayes M, **Merlo CA**. "Hemoptysis". The Principles and Practice of Hospital Medicine, 1st Edition, Sylvia C. McKean, Editor-in-Chief, McGraw-Hill publishers.
- 8. **Merlo CA**. "Diffuse Parenchymal Lung Disease." In Current Therapy in Thoracic and Cardiovascular Surgery. Mosby 2013.
- 9. **Merlo CA**, Terry PB. "Chest X-Ray Review". In The Johns Hopkins Internal Medical Board Review. Mosby. 2015

Letters, correspondence - None

Other Media - None

Teaching

Classesses	instruction	
Classroom	instruction	

2003-2010 Pulmonary pathophysiology small group facilitator, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-2010 Good Samaritan Internal Medicine Program Guest Lectures – Cystic Fibrosis, Pulmonary Function Testing, Baltimore, MD. 2004-present Lecturer, Carol Johns Service (Inpatient Pulmonary Service) – Lecture monthly about Cystic Fibrosis and Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD. 2006-2014 Chest Radiography Conference Director – Lecture weekly for 10-15 Pulmonary and Critical Care	2003-2010	Pulmonary physiology small group facilitator, Johns Hopkins University School of Medicine, Baltimore, MD.
 Good Samaritan Internal Medicine Program Guest Lectures – Cystic Fibrosis, Pulmonary Function Testing, Baltimore, MD. Lecturer, Carol Johns Service (Inpatient Pulmonary Service) – Lecture monthly about Cystic Fibrosis and Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD. 	2003-2010	
Testing, Baltimore, MD. 2004-present Lecturer, Carol Johns Service (Inpatient Pulmonary Service) – Lecture monthly about Cystic Fibrosis and Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.		
2004-present Lecturer, Carol Johns Service (Inpatient Pulmonary Service) – Lecture monthly about Cystic Fibrosis and Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.	2004-2010	Good Samaritan Internal Medicine Program Guest Lectures – Cystic Fibrosis, Pulmonary Function
Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.		Testing, Baltimore, MD.
inpatient pulmonary service, Johns Hopkins University School of Medicine, Baltimore, MD. 2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.	2004-present	, , , , , , , , , , , , , , , , , , , ,
2004-present Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.		Lung Transplantation to medical students, residents, and fellows as part of the core curriculum on the
Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of HIV, Johns Hopkins University School of Medicine, Baltimore, MD.		
HIV, Johns Hopkins University School of Medicine, Baltimore, MD.	2004-present	Lecturer, Pulmonary and Critical Care Medicine Fellow's Core Conference – Cystic Fibrosis, Lung
		Transplantation, Hereditary Hemorrhagic Telangiectasia, and Noninfectious Pulmonary Complications of
2006-2014 Chest Radiography Conference Director – Lecture weekly for 10-15 Pulmonary and Critical Care		HIV, Johns Hopkins University School of Medicine, Baltimore, MD.
O(1)	2006-2014	Chest Radiography Conference Director – Lecture weekly for 10-15 Pulmonary and Critical Care
Medicine fellows regarding the reading of chest radiographs and computed tomography, Johns Hopkins		Medicine fellows regarding the reading of chest radiographs and computed tomography, Johns Hopkins
University School of Medicine, Baltimore, MD.		University School of Medicine, Baltimore, MD.

Clinical Instruction

2004-present	Medical Intensive Care Unit. Attending physician 4 to 6 weeks per year, Johns Hopkins.
2004-present	Pulmonary Consultation Service. Attending physician four weeks per year, Johns Hopkins.
2004-present	Lung Transplantation and Pulmonary Hypertension Service. Attending physician 8 weeks per year, Johns
	Hopkins.
2004-present	Pulmonary Physiology Service. Attending physician four weeks per year, Johns Hopkins.
2005-present	Janeway Firm Faculty. Teaching Attending 4 weeks per year, Johns Hopkins.
2004-present 2004-present	Lung Transplantation and Pulmonary Hypertension Service. Attending physician 8 weeks per year, John Hopkins. Pulmonary Physiology Service. Attending physician four weeks per year, Johns Hopkins.

CME Instruction

	
5/06	PFT interpretation, Topics/Tumulty Rounds, Johns Hopkins, Baltimore, MD.
4/06	Challenging infections among adults with cystic fibrosis. Medical Grand Rounds. Johns Hopkins,
	Baltimore, MD
8/07	Update in Pulmonary and Critical Care Medicine, Johns Hopkins, Williamsburg VA.
1/07	Cough for the Allergist, Allergy Symposium, Bayview Medical Center, Baltimore, MD.
7/08	Update in Pulmonary and Critical Care Medicine, Johns Hopkins, Bar Harbor ME.
2/09	Hereditary Hemorrhagic Telangiectasia- A Fresh Start to an Old Disease. Medical Grand Rounds. Johns
	Hopkins, Baltimore, MD.
7/09	Update in Pulmonary and Critical Care Medicine, Johns Hopkins, Washington DC.
1/10	An update in Cystic Fibrosis, Allergy Lecture Series, Johns Hopkins, Baltimore, MD.
4/12	Nutritional Considerations after Lung Transplantation in Cystic Fibrosis. Nutrition Grand Rounds.
	Johns Hopkins, Baltimore, MD.
9/12	Hereditary Hemorrhagic Telangiectasia. Medical Grand Rounds. Johns Hopkins Bayview. Baltimore,
	MD.
5/14	A Curious Case of Hypoxemia, Topics/Tumulty Rounds, Johns Hopkins, Baltimore, MD.

9/14 Creating a Common Language in Cystic Fibrosis to Improve Adherence, Lecturer, Med-IQ. www.med-iq.com/a796

Workshops/Seminars

5/08	Invited Lecturer, Observational Studies, Short Course in Epidemiology. American Thoracic Society,
	Toronto, ON.
10/09	Symposium Chairperson, Infectious Complications in Cystic Fibrosis. North American Cystic Fibrosis
	Conference, Minneapolis MN.
10/10	Symposium Chairperson, End Stage Lung Disease in CF: From Lung transplantation to Paliative Care,
	North American Cystic Fibrosis Conference, Baltimore, MD.
10/10	Invited Lecturer. Rise and Shine Workshop Management of Hemoptysis and Pneumothorax in Cystic

Fibrosis. North American Cystic Fibrosis Conference, Baltimore, MD.

Mentoring

Advisees	
2006-2010	Elliott Dasenbrook, MD MHS, Post-doctoral Fellow, Pulmonary and Critical Care Medicine Johns Hopkins University, currently Assistant Professor of Medicine at Case Western Reserve, Cleveland, OH.
2006-2010	Jeffrey Hoag, MD, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins University, currently Assistant Professor of Medicine at Drexel University, Philadelphia, PA.
2008-2011	Brad Drummond, MD MHS, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins University, currently Assistant Professor of Medicine, Johns Hopkins University, Baltimore MD.
2008-2012	Natalie West, MD MHS, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins
2009-2011	University, currently Assistant Professor of Medicine at Johns Hopkins University, Baltimore, MD. Eric Weiss, MD MPH, Master's of Public Health student at Johns Hopkins Bloomberg School of Public Health, currently Assistant Professor of Surgery (adjunct) at Columbia College of Physicians and Surgeons, New York, NY.
2010-2012	Jeremiah Allen, MD, Resident, Johns Hopkins University, currently Attending Cardiac Surgeon, Kaiser Permanente, San Francisco, CA.
2010-present	Andrew Braun, MD MHS, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins University, currently Instructor of Medicine, Johns Hopkins University, Baltimore, MD.
2011-2013	Timothy George, MD, Resident, Johns Hopkins University, currently Resident Surgeon at Johns Hopkins University, Baltimore, MD.
2011-2014	Arman Kilic, MD, Resident, Johns Hopkins University, currently Resident Surgeon, Johns Hopkins University, Baltimore, MD.
2011-present	Mark Jennings, MD, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins University, currently Instructor of Medicine, Johns Hopkins University, Baltimore, MD.
2012-2016	Allison Lambert, MD MHS, Post-doctoral Fellow, Pulmonary and Critical Care Medicine, Johns Hopkins University, currently Instructor of Medicine, Johns Hopkins University, Baltimore, MD.
2012-2016	George Arnaoutakis, MD, Resident, Johns Hopkins Universeity, currently Cardiac Surgery Fellow, University of Pennsylvania, Philadelphia, PA.
2014-present	Joshua Grimm, MD, Resident, Johns Hopkins University, currently Resident Surgeon, Johns Hopkins University, Baltimore, MD.
2014-present	Linda Yin, Medical student, Johns Hopkins University, currently a medical student at Johns Hopkins University, Baltimore, MD.
2015-present	Todd Crawford, MD, Resident, Johns Hopkins University, currently Resident Surgeon, Johns Hopkins University, Baltimore, MD.
2015-present	Trent Magruder, MD, Resident, Johns Hopkins University, currently Resident Surgeon, Johns Hopkins University, Baltimore, MD.

Educational Program Building/ Leadership

2006-present Course Director, Design of Clinical Studies, Johns Hopkins Bloomberg School of Public Health. This is an ongoing course available in the 2nd term each year through the Department of Epidemiology in the School of Public Health. It is part of a series of courses known formally together as the Science of

Clinical Investigation series. Together these courses convey the fundamentals of clinical research. In my capacity as director, I am responsible each year for the syllabus, lectures, homework assignments, and follow-up questions which arise during the 12-week class. The course has expanded over the years starting with a class size of about 6-8 to know over 40 per term and now includes physicians, nurses, administrators, and research coordinators.

2012-present

Course Director, Distance Education Design of Clinical Studies, Johns Hopkins Bloomberg School of Public Health. This is a fully online version of the above course available through the Office of Distance Education in the 3rd term. Lectures, assignments, and quizzes are all available online. Live sessions accompany the online media. This course has also expanded from just a few to over 30 students per session.

Educational Extramural Funding (Current, Pending, Previous) - None

CLINICAL ACTIVITIES

Certification

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1998	Medical License, Commonwealth of Virginia	0101057430	Inactive
1999	Medical License, District of Columbia	MD31720	Inactive
2004-present	Medical License, Maryland	D0061725	Active

Boards

2000	Diplomate, Internal Medicine, American Board of Internal Medicine
2003	Diplomate, Pulmonary Disease, American Board of Internal Medicine
2005	Diplomate, Critical Care Medicine, American Board of Internal Medicine

Clinical Responsibilities

2004-present	Medical Intensive Care Unit. Attending physician 4 to 6 weeks per year, JHH.
2004-present	Pulmonary Consultation Service. Attending physician four weeks per year, JHH.

2004-present Lung Transplantation and Pulmonary Hypertension Service. Attending physician 8 weeks per year, JHH.

2004-present Pulmonary Physiology Service. Attending physician four weeks per year, JHH.

2004-present Attend in the Adult Cystic Fibrosis Clinic. One half day per week

2009-present Attend in HHT Clinic. One half day per month

2011-present Attend in the Lung Transplantation Clinic. One half day per week

Clinical Program Building/Leadership

2010-2018

Director, Johns Hopkins Hereditary Hemorrhagic Telangiectasia Center of Excellence. In my capacity, I am responsible for the coordination of multidisciplinary care for the patients with HHT that we care for at Johns Hopkins. Working in partnership with Sally Mitchell, MD, we created the Johns Hopkins HHT Center of Excellence in 2010, one of 17 such centers in the United States. The center now includes over 35 specialists from 15 Hopkins Departments and Divisions and has increased exponentially in size to include over 400 patients and family members. The team at Hopkins now consists of a nurse coordinator as well as specialists from nearly every division and department within the Hopkins system.

2015-present

Associate Program Director, Johns Hopkins Adult Cystic Fibrosis Center. In my capacity, I assist the Program and Center Director in the coordination of care guidelines and the delivery of clinical care in both the inpatient and outpatient settings, assist with coordination of clinical trials, and provide education to medical students, physicians, nurses, respiratory and physical therapists, nutritionists, social workers, patients, and family members regarding the multidisciplinary subspecialty care needed for patients with CF

Clinical Extramural Funding (Current, Pending, Previous) - None

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES - None

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

2003-2005 Educational Committee, Division of Pulmonary and Critical Care Medicine 2005-present Faculty Recruitment Committee, Division of Pulmonary and Critical Care

2014-present Assistant Director of Outpatient Services, Johns Hopkins Division of Pulmonary and Critical Care

Medicine

Associate Program Director, Adult Cystic Fibrosis Center, Johns Hopkins Cystic Fibrosis Center 2015-present

Editorial Activities - Not Applicable

Journal Reviewer

2009-present Chest

2009-present Journal of Heart and Lung Transplant

2009-present Journal of Cystic Fibrosis 2009-present European Respiratory Journal 2009-present American Journal of Transplantation

Advisory Committees, Review Groups/Study Sections

2012-present Member, Cystic Fibrosis Foundation Grant review Committee

Professional Societies

2004-present Member, American Thoracic Society

2004-present Member, American College of Chest Physicians

2010-present Member, International Society for Heart and Lung Transplant

Conference Organizer, Session Chair - Not Applicable

Consultantships - Not Applicable

RECOGNITION

Awards, Honors

Awarus, none	ors — — — — — — — — — — — — — — — — — — —
1999	Clinical Pearls Student Teaching Appreciation Award
1999	The William P. Argy Memorial House Staff Award
2000	Alpha Omega Alpha, Georgetown University
2003	DC Thoracic Society Annual Conference Award
2003	NIH Loan Repayment Program Award for Clinical Research
2005	Janeway Firm Faculty
2005	CHEST Foundation's Young Investigator Award
2005	NIH Loan Repayment Program Award for Clinical Research
2010	Fellows Teaching Award, Johns Hopkins

the Balance at Hopkins". Minneapolis, MN.

Invited Talks

Local/National,	/International
2005	Speaker, Medical Grand Rounds. Virginia Hospital Center. "The Care of Adults with Cystic Fibrosis".
	Arlington, VA
2005	Speaker, Pulmonary Grand Rounds. The University of Pittsburgh. "The influence of environmental and
	genetic factors on outcomes in cystic fibrosis". Pittsburgh, PA.
2007	Plenary Speaker, International Society for Heart and Lung Transplant. "The effect of the Lung
	Allocation Score (LAS) on survival after lung transplantation". San Francisco, CA.
2008	Speaker, North American Cystic Fibrosis Conference. "The Impact of the LAS on Outcomes in CF".
	Orlando, FL.
2008	Speaker, Mid Atlantic Thoracic Society Conference. "Adult Cystic Fibrosis". Richmond, VA.
2009	Speaker, Hereditary Hemorrhagic Telangiectasia International Scientific Conference. "Quality of Life
	among Patients with Hereditary Hemorrhagic Telangiectasia". Santander, Spain.
2010	Speaker/ Session Chair, Society for General Internal Medicine, "Research During Residency-Striking

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2010	Speaker/ Session Chair, North American Cystic Fibrosis Conference. "Lung Transplantation and Cystic
	Fibrosis". Baltimore, MD.
2010	Speaker, Pulmonary Grand Rounds. Brown University. "Hereditary Hemorrhagic Telangiectasia".
	Providence, RI.
2010	Speaker, 8th International Congress on Lung Transplantation. "Understanding and Dissecting the Lung
	Allocation Scoring System". Paris, France.
2012	Speaker, Medical Grand Rounds. Georgetown University Hospital. "Adult Cystic Fibrosis".
	Washington, DC.
2012	Speaker, 16th Annual HHT Patient and Family Day, HHT Foundation, "Understanding Screening for
2012	HHT." Orlando, FL.
2013	Speaker, American Thoracic Society. "Understanding and Dissecting the Lung Allocation Scoring
2012	System". Philadelphia, PA.
2013	Speaker, Cystic Fibrosis Conference Mexico. "Outcomes in Adults with Cystic Fibrosis". Mexico City, Mexico.
2013	Speaker, Hereditary Hemorrhagic Telangiectasia International Scientific Conference. "Minimal Clinical
2013	Important Difference in Epistaxis Severity Score in HHT". Cork, Ireland.
2014	Speaker, Medical Grand Rounds. Virginia Hospital Center. "Adult Cystic Fibrosis". Arlington, VA.
2011	opeaker, medicai Orand Rounds. Virginia 1105phai Oenter. Tradit Oyste 1101088 . Trimigron, VII.
OTHER PR	OFESSIONAL ACCOMPLISHMENTS
2013	Washington Post. When should you start worrying about that lingering cough? Give it time.
	http://www.washingtonpost.com/national/health-science/when-should-you-start-worrying-about-that-
	lingering-cough-give-it-time/2013/12/20/1e615e9c-665d-11e3-ae56-22de072140a2_story.html
2013	Hopkins Medicine. For Lung Transplant, Researchers Surprised to Learn Bigger Appears to Be Better.
	http://www.hopkinsmedicine.org/news/media/releases/for_lung_transplant_researchers_surprised_to_

Cover photograph entitled "A View of the Dome". Annals of the American Thoracic Society, Volume

http://www.hopkinsmedicine.org/news/publications/johns hopkins health/fall 2014/calming that co

EurekAlert! Lung transplant patients in the UK fare better than publicly insured Americans.

learn_bigger_appears_to_be_better_

Johns Hopkins Health. Calming that cough.

11, Issue 5. http://www.atsjournals.org/toc/annalsats/11/5

http://www.eurekalert.org/pub_releases/2015-03/jhm-ltp031915.php

2014

2014

2015

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APPENDIX B

APPENDIX B

List of Literature Review and Materials Considered by Dr. Christian Merlo

- 1. Abenhaim et al., *Appetite-Suppressant Drugs and the Risk of Primary Pulmonary Hypertension.* (1996) 335(9) N Engl J Med 609
- 2. Berge et al., Genital use of talc and risk of ovarian cancer: a meta-analysis. (2018) 27 Eur J Cancer Prev 248
- 3. Booth et al., *Risk factors for ovarian cancer: a case-control study.* (1989) 60(4) Br J Cancer. 592
- 4. Centers for Disease Control & Prevention, Principles of Epidemiology in Public Health Practice, Third Edition, An Introduction to Applied Epidemiology and Biostatistics, Lesson 1: Introduction to Epidemiology, https://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section1.html
- 5. Chang & Risch,. *Perineal talc exposure and risk of ovarian carcinoma*. (1997) 79(12) Cancer. 2396
- 6. Chen et al., *Risk factors for epithelial ovarian cancer in Beijing, China.* (1992) 21(1) Int J Epidemiol. 23
- 7. Cook et al., *Perineal powder exposure and the risk of ovarian cancer.* (1997) 145(5) Am J Epidemiol. 459
- 8. Cramer & Xu, Epidemiologic evidence for uterine growth factors in the pathogenesis of ovarian cancer. (1995) 5 Ann Epidemiol. 310
- 9. Cramer et al., Ovarian cancer and talc: a case-control study. (1982) 50(2) Cancer 372
- 10. Cramer et al., *The Association Between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States.* (2016) 27(3) Epidemiology 334
- 11. Cramer et al., *Genital talc exposure and risk of ovarian cancer*. (1999) 81(3) Int J Cancer. 351
- 12. Deposition of Anne McTiernan, M.D., Ph.D., Jan. 28, 2019 (MDL No. 2738)
- 13. Deposition of April Zambelli-Weiner, Ph.D., Jan. 11, 2019 (MDL No. 2738)
- 14. Deposition of April Zambelli-Weiner, Ph.D., Feb. 7, 2019 (MDL No. 2738)
- 15. Deposition of Ghassan Saed, Ph.D., Jan. 23, 2019 (MDL No. 2738)
- 16. Deposition of Ghassan Saed, Ph.D., Feb. 14, 2019 (MDL No. 2738)
- 17. Deposition of Jack Siemiatycki, Jan. 31, 2019 (MDL No. 2738)
- 18. Deposition of Rebecca Smith-Bindman, M.D., Feb. 7, 2019 (MDL No. 2738)
- 19. Deposition of Rebecca Smith-Bindman, M.D., Feb. 8, 2019 (MDL No. 2738)
- 20. Deposition of Patricia Moorman, M.S.P.H., Ph.D., Jan. 25, 2019 (MDL No. 2738)
- 21. Deposition of Sonal Singh, M.D., M.P.H., Jan. 16, 2019 (MDL No. 2738)
- 22. Doll & Hill, *The mortality of doctors in relation to their smoking habits.* (1954) 328 (7455) BMJ 1529
- 23. Expert Report of Anne McTiernan, M.D., Ph.D., Nov. 16, 2018 (MDL No. 2738)
- 24. Expert Report of April Zambelli-Weiner, Ph.D., M.P.H., Nov. 16, 2018 (MDL No. 2738)
- 25. Expert Report of Ghassan Saed, Ph.D., Nov. 16, 2018 (MDL No. 2738)
- 26. Expert Report of Jack Siemiatycki, M.Sc., Ph.D., Nov. 16, 2018 (MDL No. 2738)
- 27. Expert Report of Patricia Moorman, M.S.P.H., Ph.D., Nov. 16, 2018 (MDL No. 2738)
- 28. Expert Report of Rebecca Smith-Bindman, M.D., Nov. 15, 2019 (MDL No. 2738)
- 29. Expert Report of Sonal Singh, M.D., M.P.H., Nov. 16, 2018 (MDL No. 2738)

- 30. Gates et al., *Risk Factors for Epithelial Ovarian Cancer by Histologic Subtype.* (2010) 171 Am. J. Epidemiology 45
- 31. Gates et al., *Talc use, variants of the GSTM1, GSTT1, and NAT2 genes, and risk of epithelial ovarian cancer.* (2008) 17(9) Cancer Epidemiol Biomarkers 2436
- 32. Gertig et al., *Prospective Study of Talc Use and Ovarian Cancer*. (2000) 92 J. Nat. Cancer Inst. 249
- 33. Godard et al., Risk factors for familial and sporadic ovarian cancer among French Canadians: a case-control study. (1998) 179(2) Am J Obstet Gynecol. 403
- 34. Gonzalez et al., *Douching, Talc Use, and Risk of Ovarian Cancer.* (2016) 27 Epidemiology 797
- 35. Green A, Purdie D, Bain C, et al., *Tubal sterilisation, hysterectomy and decreased risk of ovarian cancer. Survey of Women's Health Study Group.* (1997) 71(6) Int J Cancer. 948
- 36. Grimes & Schultz, *Bias and causal associations in observational research*. (2002) 259(9302) Lancet 248
- 37. Gross & Berg, *A meta-analytical approach examining the potential relationship between talc exposure and ovarian cancer.* (1995) 5(2) J Expo Anal Environ Epidemiol. 181
- 38. Harlow & Weiss, *A case-control study of borderline ovarian tumors: the influence of perineal exposure to talc.* (1989) 130(2) Am J Epidemiol. 390
- 39. Harlow et al., *Perineal exposure to talc and ovarian cancer risk.* (1992) 80(1) Obstet Gynecol. 19
- 40. Hartge & Stewart., Occupation and ovarian cancer: a case-control study in the Washington, DC, metropolitan area, 1978-1981. (1994) 36(8) J Occup Med. 924
- 41. Hartge et al., Talc and Ovarian Cancer, (1983) 250 J. Am. Med. Ass'n 1844
- 42. Hill, *Environment and disease: association or causation?* (1965) 58 Proc Royal Soc Med. 295
- 43. Houghton et al., *Perineal Powder Use and Risk of Ovarian Cancer*. (2014) 106(9) J Nat. Cancer Inst
- 44. Huncharek et al., Perineal Application of Cosmetic Talc and Risk of Invasive Epithelial Ovarian Cancer: A Meta-analysis of 11,933 Subjects from Sixteen Observational Studies. (2003) 23 Anticancer Res. 1955
- 45. Huncharek et al., *Use of cosmetic talc on contraceptive diaphragms and risk of ovarian cancer: a meta-analysis of nine observational studies.* (2007) 18 Eur J Cancer Prev 422
- 46. Infante-Rivard, *Hospital or Population Controls for Case-Control Studies of Sever Childhood Diseases?* (2003) 157(2) Am J Epidemiol 176
- 47. Jordan et al., *Risk factors for benign, borderline and invasive mucinous ovarian tumors: Epidemiological evidence of a neoplastic continuum?* (2007) 107 Gynecol. Oncol. 223
- 48. Jordan et al., *Risk factors for benign serous and mucinous epithelial ovarian tumors.* (2007) 109(3) Obstet Gynecol. 647
- 49. Kurta et al., *Use of Fertility Drugs and Risk of Ovarian Cancer: Results from a U.S.-Based Case-Control Study.* (2012) 21(8) Cancer Epidemiol Biomarkers Prev. 1282
- 50. Langseth et al., *Perineal use of talc and risk of ovarian cancer.* (2008) 62 J Epidemiol Community Health 358
- 51. Malmberg et al., *Serous tubal intraepithelial carcinoma, chronic fallopian tube injury, and serous carcinoma development.* (2016) 468(6) Virchows Arch. 707-13
- 52. Merritt et al., *Talcum Powder, chronic pelvic inflammation and NSAIDs in relation to risk of epithelial ovarian cancer.* (2008) 122 Int'l J. Cancer 170

- 53. Mills et al., *Perineal Talc Exposure and Epithelial Ovarian Cancer Risk in the Central Valley of California.* (2004) 112 Int'l J. Cancer 458
- 54. Moorman et al., *Ovarian Cancer Risk Factors in African-American and White Women.* (2009) 170(5) Am J Epidemiol 598
- 55. Narod, Talc and ovarian cancer. (2016) 141 Gynecol. Oncol. 410
- 56. Nat. Cancer Inst., *Cancer Stat Facts: Ovarian Cancer*, https://seer.cancer.gov/statfacts/html/ovary.html
- 57. Nat. Cancer Inst., *Ovarian, Fallopian Tube, and Primary Peritoneal Cancer Prevention* (*PDQ*) *Health Professional Version*, https://www.cancer.gov/types/ovarian/hp/ovarian-prevention-pdq#link/_220_toc (last updated Jan. 4, 2019)
- 58. Nat. Health & Medical Res. Council, NHMRC Levels of Evidence and Grades for Recommendations for Developers of Clinical Practice Guidelines (2009)
- 59. Ness et al., Factors related to inflammation of the ovarian epithelium and risk of ovarian cancer. (2000) 11(2) Epidemiology 111
- 60. Oleckno, Epidemiology: Concepts and Methods. (2008)
- 61. Penninkilampi and Eslick, *Perineal Talc Use and Ovarian Cancer: A Systematic Review and Meta-Analysis.* (2018) 29(1) Epidemiology 41
- 62. Pike et al., *Hormonal factors and the risk of invasive ovarian cancer: a population-based case-control study.* (2004) 82(1) Fertil Steril. 186
- 63. Purdie et al., *Reproductive and other factors and risk of epithelial ovarian cancer: an Australian case-control study.* Survey of Women's Health Study Group. (1995) 62(6) Int J Cancer. 678
- 64. Rosenblatt et al., *Genital powder exposure and the risk of epithelial ovarian cancer.* (2011) 22 Cancer Causes Control 737
- 65. Rosenblatt et al., *Mineral Fiber Exposure and the Development of Ovarian Cancer*, (1992) 45 Gynecologic Oncology 20
- 66. Rosenblatt et al., *Characteristics of women who use perineal powders.* (1998) 92(5) Obstet Gynecol 753
- 67. Schildkraut et al., Association between Body Powder Use and Ovarian Cancer: The African American Caner Epidemiology Study (AACES). (2016) 25(10) Cancer Epidemiol Biomarkers Prev. 1411
- 68. Schlesselman, Case-control studies: design, conduct, analysis (1982)
- 69. Schultz & Grimes, Case-control studies: research in reverse. (2002) 359(9304) Lancet 431
- 70. Shushan et al., *Human menopausal gonadotropin and the risk of epithelial ovarian cancer**. (1996) 65(1) Fertil Steril. 13
- 71. Terry et al., Genital Powder Use and Risk of Ovarian Cancer: A Pooled Analysis of 8,525 Cases and 9,859 Controls. (2013) 6(8) Cancer Prev Res 811
- 72. The Scandinavian Simvastatin Survival Study Group. *Design and baseline results of the Scandinavian Simvastatin Survival Study of patients with stable angina and/or previous myocardial infarction.* (1993) 71 Am J Cardiol 393
- 73. Tzonou et al., *Hair dyes, analgesics, tranquilizers and perineal talc application as risk factors for ovarian cancer.* (1993) 55(3) Int J Cancer. 408
- 74. Vavken & Dorotka, *A Systematic Review of Conflicting Meta-Analyses in Orthopaedic Surgery*. (2009) 467(10) Clin Orthop Relat Res. 2723

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- 75. Vetter & Mascha, *Bias, Confounding, and Interaction: Lions and Tigers, and Bears, Oh My!*, (2017) 125(3) Anesth Analg 1042
- 76. Wang et al., *Statistics in Medicine Reporting of Subgroup Analyses in Clinical Trials.* (2007) 357(21) N Engl J Med 2189
- 77. Whittemore et. al., *Personal And Environmental Characteristics Related To Epithelial Ovarian Cancer*, (1988) 128 Am J. Epidemiol 1228
- 78. Wong et al. *Perineal talc exposure and subsequent epithelial ovarian cancer: a case-control study.* (1999) 93 Obstet Gynecol 372
- 79. Wu et al., African Americans and Hispanics Remain at Lower Risk of Ovarian Cancer Than Non-Hispanic Whites after Considering Nongenetic Risk Factors and Oophorectomy Rates. (2015) 24(7) Cancer Epidemiol Biomarkers Prev. 1094
- 80. Wu et al., Markers of inflammation and risk of ovarian cancer in Los Angeles County. (2009) 124 Int'l J. Cancer 1409
- 81. Wynder et al., Radford Conference Report: Weak associations in epidemiology and their interpretation (3rd ed.). (1982) 11 Prev. Med

APPENDIX C

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Fed. R. Civ. P. 26(a)(2)(B)(v) Disclosure for Christian Merlo, M.D., M.P.H.

Year	Parties	State	Caption
			Blevins v. Pyron
2015	Blevins v. Pyron	Missouri	Lawrence County Circuit Court
			14LW-CC00108
			Grove v. UMMS
2015	Grove v. UMMS	Maryland	USDC Maryland
			12-cv-2950
			Dutton v. UMMS
2015	Dutton v. UMMS	Maryland	Baltimore City Circuit Court
			24-C-14-003848
			Hawkins v. Mercy Kansas
2015	Hawkins v. Mercy Kansas	Missouri	St. Louis City Circuit Court
			1422-CC09810
			Whitehead v. CVS
2015	Whitehead v. CVS	Florida	Miami-Dade County Circuit Court
			14-25980CA01
			Evans v. Livingston Health Care
2016	Evans v. Livingston Health Care	Montana	Gallatin County District Court
			DV-11-990B
			Moore v. Mercy
2016	Moore v. Mercy	Maryland	Baltimore City Circuit Court
			24-C-16-004483
			Quintanilla v Narayanan
2016	Quintanilla v. Narayanan	Maryland	Montgomery County Circuit Court
			397252V
			Burns v. Bowser
2017	Burns v. Bowser	Virginia	Virginia 13th Judicial Circuit
			CL14005484-00
			Monroe v. Franklin Square
2017	Monroe v. Franklin Square	Maryland	Baltimore County Circuit Court
			03-C-16-001886
			Weisman v. Maryland General
2017	Weisman v. Maryland General	Maryland	Baltimore City Circuit Court
			24-C-16-004199
			Almquist v. Kinsey
2017	Almquist v. Kinsey	Maryland	USDC Maryland
			1:15cv292
			Sullivan v. Holy Cross
2017	Sullivan v. Holy Cross	Maryland	Montgomery County Circuit Court
			423516v
			Flores v. Kaiser
2018	Flores v. Kaiser	Maryland	Montgomery County Circuit Court
			427661v
			Hamlin-Lewis v. Guckes
2018	Hamlin-Lewis v. Guckes	Maryland	USDC Maryland
			1:16cv3357
			Hirschenson v. Cleveland Clinic
2018	Hirschenson v. Cleveland Clinic	Florida	Broward County Circuit Court
			CACE13001180
			Knoerlein v. Express Primary Care
2018	Knoerlein v. Express Primary Care	Maryland	Baltimore County Circuit Court
	<u> </u>		03-C-17-001137
			McRae v. Dimensions Health
2018	McRae v. Dimensions Health	Maryland	Prince George's County Circuit Court
			CAL1702184
2018	Fluoroquinolone Liability Litigation	New Jersey	
<u> </u>			
			Jones vs Bon Secours Hospital Baltimore, Inc, et al ("Jones v. Agrawal")
2019	Jones v. Agrawal	Maryland	Baltimore County Circuit Court
			24C18000398

Exhibit 7

Christian Merlo, M.D., MPH

Page 1

UNITED STATES DISTRICT COURT DISTRICT OF NEW JERSEY

IN RE: JOHNSON &)

JOHNSON TALCUM POWDER)

PRODUCTS MARKETING)

SALES PRACTICES AND) MDL 16-2738

PRODUCT LIABILITY) (FLW)(LHG)

LITIGATION)

THIS DOCUMENT)

PERTAINS TO ALL CASES)

THURSDAY, APRIL 18, 2019

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Videotaped deposition of Christian Merlo, M.D., MPH, held at the offices of VENABLE LLP, 750 East Pratt Street, Suite 900, Baltimore, Maryland, commencing at 9:06 a.m., on the above date, before Carrie A. Campbell, Registered Diplomate Reporter and Certified Realtime Reporter.

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8	9 10 11 12 13 14	Studies on Talc and Ovarian Cancer by Kenneth Rothman, et al., IMERYS 209695 - IMERYS 209705 Merlo 30 Systematic Review and 438 Meta-Analysis of the Association between Perineal Use of Talc and Risk of Ovarian Cancer, Taher, et al. Merlo 31 "Ovarian, Fallopian Tube, and Primary Peritoneal Cancer Prevention (PDQ)- Health	1 1 1 1 1	1 2 3 4 5 6 6
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1	VIDEOGRAPHER: We are now on	1	this year that would make it more current?
2	the record.	2	A. There are probably a couple of
3	My name is Daniel Holmstock.	3	articles that I need to put in there.
4	I'm the videographer for Golkow	4	Q. Do any of them deal with
5	Litigation Services.	5	ovarian cancer?
6	Today's date is April 18, 2019,	6	A. They do not.
7	and the time on the video screen is	7	Q. Do any of them deal with talc?
8	9:06 a.m.	8	A. They do not.
9	This deposition is being held	9	Q. Okay. Get back to your CV in a
10	at the law offices of Venable LLP, 750	10	moment.
11	East Pratt Street, Suite 900,	11	You're a medical doctor?
12	Baltimore, Maryland, for the matter of	12	A. I am.
13	In Re: Johnson & Johnson Talcum Powder	13	Q. And you're board certified in
14	Products Marketing, Sales Practices	14	internal medicine?
15	and Products Liability Litigation, MDL	15	A. Internal medicine, pulmonary
16	Number 2738, pending before the United	16	medicine and critical care medicine.
17	States District Court for the Eastern	17	Q. Okay. And you are also an
18	District of New Jersey.	18	associate professor of medicine in the
19	Our deponent today is	19	Department of Pulmonary and Critical Care
20	Dr. Christian Merlo.	20	Medicine at Johns Hopkins University?
21	Counsel for the record will be	21	A. In the department of medicine
22	noted on the stenographic record for	22	and also in the department of epidemiology at
23	appearances.	23	the School of Public Health.
24	Our court reporter is Carrie	24	Q. I'll ask you about the second
25	Campbell, who will now administer the	25	later, but my specific question is that you
	Page 11		Page 13
1	oath to the witness.	1	are associate professor of medicine in the
2			
_		2	Department of Pulmonary and Critical Care
3	CHRISTIAN MERLO, M.D., MPH,	3	Department of Pulmonary and Critical Care Medicine at Johns Hopkins University?
4	of lawful age, having been first duly sworn		Medicine at Johns Hopkins University? A. But my official title is an
4 5	of lawful age, having been first duly sworn to tell the truth, the whole truth and	3	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in
4 5 6	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on	3 4 5 6	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology.
4 5 6 7	of lawful age, having been first duly sworn to tell the truth, the whole truth and	3 4 5 6 7	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for
4 5 6 7 8	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows:	3 4 5 6 7 8	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.)
4 5 6 7 8 9	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for	3 4 5 6 7 8 9	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI:
4 5 6 7 8 9	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows:	3 4 5 6 7 8 9	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show
4 5 6 7 8 9 10	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.)	3 4 5 6 7 8 9 10	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as
4 5 6 7 8 9 10 11	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION	3 4 5 6 7 8 9 10 11	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2.
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4 5 6 7 8 9 10 11 12 13 14 15	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you,	3 4 5 6 7 8 9 10 11 12 13 14 15	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI:
4 5 6 7 8 9 10 11 12 13 14 15 16	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1. Do you see that?	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the Johns Hopkins Division of Pulmonary and
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1. Do you see that? A. I do.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the Johns Hopkins Division of Pulmonary and Critical Care Medicine.
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4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1. Do you see that? A. I do. Q. Is this your current CV? This was produced to us in connection with this litigation.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the Johns Hopkins Division of Pulmonary and Critical Care Medicine. Do you see that? A. I see the exhibit, yes. Q. Okay. And who is Nadia Hansel?
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1. Do you see that? A. I do. Q. Is this your current CV? This was produced to us in connection with this litigation. A. Seems about right.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the Johns Hopkins Division of Pulmonary and Critical Care Medicine. Do you see that? A. I see the exhibit, yes. Q. Okay. And who is Nadia Hansel? A. Nadia Hansel is our current
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	of lawful age, having been first duly sworn to tell the truth, the whole truth and nothing but the truth, deposes and says on behalf of the Plaintiffs, as follows: (Merlo Exhibit 1 marked for identification.) DIRECT EXAMINATION QUESTIONS BY MR. TISI: Q. Please state your name. A. My name is Christian Merlo. Q. And I've placed before you, Dr. Merlo, a copy of your CV as Exhibit 1. Do you see that? A. I do. Q. Is this your current CV? This was produced to us in connection with this litigation.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Medicine at Johns Hopkins University? A. But my official title is an associate professor of medicine in epidemiology. (Merlo Exhibit 2 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. I would like you show you what I would like to have marked as Exhibit Number 2. This is the MR. TISI: I'm sorry, did you put an exhibit sticker on it? QUESTIONS BY MR. TISI: Q. This is the web page to the Johns Hopkins Division of Pulmonary and Critical Care Medicine. Do you see that? A. I see the exhibit, yes. Q. Okay. And who is Nadia Hansel?

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1	Q. She basically runs your	1	care of patients like that.
2	division?	2	Q. Okay. So I'm sorry. I
3	A. Well, she's part of the crew	3	didn't mean to interrupt you.
4	that runs the division, but she's our	4	So other than treating the side
5	division director.	5	effects that perhaps might occur in the
6	Q. Okay. And did you see where it	6	context of a patient who has gynecologic
7	describes on the second paragraph it	7	cancers, people with ovarian cancer typically
8	describes the scope of conditions treated in	8	are treated by oncologists; is that true?
9	the department, Division of Pulmonary and	9	Primarily?
10	Critical Care Medicine?	10	A. Again, if we're talking about
11	A. I see that paragraph, yes.	11	oncologic therapy, yes, they would be
12	Q. Let me read it for the record.	12	traditionally treated by oncologists.
13	It says, "We hold clinical and	13	Q. You're what's called an
14	research expertise in a broad range of	14	associate professor?
15	diseases, including asthma, COPD, critical	15	A. I am an associate professor.
16	care, cystic fibrosis, interstitial lung	16	Q. Okay. And just to follow up on
17	disease, lung cancer, lung transplantation,	17	the last question, you're not board certified
18	neuromuscular disease, pulmonary	18	in oncology, are you?
19	hypertension, sarcoidosis and sleep	19	A. I'm not.
20	medicine."	20	Q. Do you have tenure?
21	Do you see that?	21	A. Tenure is a tricky thing at
22	A. I do.	22	Hopkins. There's not really a full
23	Q. Does the Johns Hopkins Division	23	definition of it.
24	of Pulmonary and Critical Care Medicine	24	The usual definition is if
25	provide primary care treatment for	25	you're asked to stay after an instructor, the
	Page 15		Page 17
1	gynecologic cancers?	1	institution is committed to keeping you here.
2	A. I think you'd have to define	2	institution is committed to keeping you here. Q. Okay.
2 3	A. I think you'd have to define primary care treatment.	2 3	institution is committed to keeping you here. Q. Okay. A. But there's no contract that
2 3 4	A. I think you'd have to define primary care treatment. Q. Yes.	2 3 4	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can
2 3 4 5	A. I think you'd have to define primary care treatment.Q. Yes.A. We do have an oncologic center	2 3 4 5	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever."
2 3 4 5 6	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are	2 3 4 5 6	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor?
2 3 4 5 6 7	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of	2 3 4 5 6 7	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor.
2 3 4 5 6 7 8	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are	2 3 4 5 6 7 8	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical
2 3 4 5 6 7 8 9	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU.	2 3 4 5 6 7 8	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care
2 3 4 5 6 7 8 9	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the	2 3 4 5 6 7 8 9	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry.
2 3 4 5 6 7 8 9 10	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care	2 3 4 5 6 7 8 9 10	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been
2 3 4 5 6 7 8 9 10 11	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes.	2 3 4 5 6 7 8 9 10 11	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic
2 3 4 5 6 7 8 9 10 11 12 13	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine?	2 3 4 5 6 7 8 9 10 11 12 13	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as
2 3 4 5 6 7 8 9 10 11 12 13	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine? Okay. But the treatment of	2 3 4 5 6 7 8 9 10 11 12 13	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as well as patients who have other lung
2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine? Okay. But the treatment of people who actually are diagnosed, until the	2 3 4 5 6 7 8 9 10 11 12 13 14 15	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as well as patients who have other lung diseases, as well as those who require
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine? Okay. But the treatment of people who actually are diagnosed, until the very end of their treatment, is not in your	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as well as patients who have other lung diseases, as well as those who require critical care therapy.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine? Okay. But the treatment of people who actually are diagnosed, until the very end of their treatment, is not in your division; is that correct? A. Again, I think you'd have to define what the treatment is Q. Okay. A because sometimes the treatment involved in gynecologic cancers involves therapies that give side effects, and those side effects land those patients in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as well as patients who have other lung diseases, as well as those who require critical care therapy. Is that true? MS. MILLER: Objection. Are you looking at this? MR. TISI: I'm not you can object. THE WITNESS: No, you'd have to show me where you're getting that. I mean, I have lots of expertise. I
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. I think you'd have to define primary care treatment. Q. Yes. A. We do have an oncologic center where we take care of many patients who are very, very sick with cancers, and some of those involve gynecologic cancers, and we are the primary caregiver in our onc ICU. Q. Okay. But is that in the Division of Pulmonary and Critical Care A. Yes. Q Medicine? Okay. But the treatment of people who actually are diagnosed, until the very end of their treatment, is not in your division; is that correct? A. Again, I think you'd have to define what the treatment is Q. Okay. A because sometimes the treatment involved in gynecologic cancers involves therapies that give side effects,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	institution is committed to keeping you here. Q. Okay. A. But there's no contract that one signs or that one gets saying "you can stay here forever." Q. You're not a full professor? A. I am not a full professor. Q. And your expertise is critical care is in the care critical care I'm sorry. Your expertise has been described as in critical care and cystic fibrosis, and those with lung transplants as well as patients who have other lung diseases, as well as those who require critical care therapy. Is that true? MS. MILLER: Objection. Are you looking at this? MR. TISI: I'm not you can object. THE WITNESS: No, you'd have to show me where you're getting that. I

	Page 18		Page 20
1	and a broad range of pulmonary	1	Do you see that?
2	medicine, a broad range of critical	2	A. I do.
3	care medicine as well as lung	3	Q. And you identify, if I'm
4	transplantation.	4	reading correctly, 79 peer-reviewed papers?
5	So I'm not sure where you got	5	A. Seems about right.
6	that from, but if you show me	6	Q. Do any of your peer-reviewed
7	something I can	7	papers deal with gynecologic cancers?
8	QUESTIONS BY MR. TISI:	8	A. There's one paper where we look
9	Q. We'll do that.	9	at the risk of malignancy after lung
10	I think you mentioned you don't	10	transplantation, and I believe we looked at
11	hold yourself out as an expert in oncology,	11	certain I have to go back and look at the
12	correct?	12	paper, but I believe we looked at all sorts
13	MS. MILLER: Objection.	13	of cancers, and gynecologic cancers may have
14	THE WITNESS: I think what I	14	been in there as well.
15	said before is I do have a broad range	15	Q. But the focus of the paper was
16	of experience in taking care of	16	the consequences of lung transplantation,
17	oncologic patients in our oncology	17	correct?
18	ICU, so I do consider myself an expert	18	A. The risk of malignancy after
19	in the intensive care unit care for	19	lung transplantation.
20	patients with oncologic disease.	20	Q. Do any of them deal
21	QUESTIONS BY MR. TISI:	21	specifically with ovarian cancer and its
22	Q. Okay. Different question,	22	causes?
23	however.	23	A. No.
24	Do you hold yourself out to	24	Q. Do any of them deal with talcum
25	your colleagues as an expert as a cancer	25	powder products?
	Page 19		Page 21
1	expert?	1	A. Excuse me. No.
2	MS. MILLER: Objection.	2	Q. Do any of them deal with
3	THE WITNESS: I'm going to have	3	asbestos?
4	to say the same thing, because part of	4	A. No.
5	cancer does deal with patients who get	5	Q. In fact, you understand in this
6	very, very, very sick. And as a	6	case that there is a claim that there is
7	group, we have several in our group	7	asbestos contamination or asbestos included
8	who attend in our oncology ICU, and	8	in talcum powder products, correct?
9	I'm one of them, and I do have	9	MS. MILLER: Objection.
10	specific expertise in that aspect of	10	THE WITNESS: I wasn't asked to
11	oncology.	11	give an opinion on asbestos in this
12	QUESTIONS BY MR. TISI:	12	case.
13	Q. And you are not board certified	13	QUESTIONS BY MR. TISI:
14	in oncology, however?	14	Q. Okay. And I understand that,
		15	and that was going to be my question. So I'm
15	A. I believe I said I wasn't.		
16	Q. And you're not a gynecologist?	16	going to ask you that you so we don't run
16 17	Q. And you're not a gynecologist?A. I'm not a gynecologist.	16 17	going to ask you that you so we don't run into problems here, I'm going to ask that you
16 17 18	Q. And you're not a gynecologist?A. I'm not a gynecologist.Q. You're not a toxicologist?	16 17 18	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay?
16 17 18 19	Q. And you're not a gynecologist?A. I'm not a gynecologist.Q. You're not a toxicologist?A. I am not a toxicologist.	16 17 18 19	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is
16 17 18 19 20	 Q. And you're not a gynecologist? A. I'm not a gynecologist. Q. You're not a toxicologist? A. I am not a toxicologist. Q. You're not a mineralogist? 	16 17 18 19 20	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is an allegation in this case and if you
16 17 18 19 20 21	 Q. And you're not a gynecologist? A. I'm not a gynecologist. Q. You're not a toxicologist? A. I am not a toxicologist. Q. You're not a mineralogist? A. I'm not a mineralogist. 	16 17 18 19 20 21	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is an allegation in this case and if you don't have an understanding, that's fine
16 17 18 19 20 21	 Q. And you're not a gynecologist? A. I'm not a gynecologist. Q. You're not a toxicologist? A. I am not a toxicologist. Q. You're not a mineralogist? A. I'm not a mineralogist. Q. Turning back to your CV, 	16 17 18 19 20 21 22	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is an allegation in this case and if you don't have an understanding, that's fine that there is asbestos in talc Johnson &
16 17 18 19 20 21 22 23	 Q. And you're not a gynecologist? A. I'm not a gynecologist. Q. You're not a toxicologist? A. I am not a toxicologist. Q. You're not a mineralogist? A. I'm not a mineralogist. Q. Turning back to your CV, Exhibit 1, page 2, you have a section 	16 17 18 19 20 21 22 23	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is an allegation in this case and if you don't have an understanding, that's fine that there is asbestos in talc Johnson & Johnson's talcum powder products?
16 17 18 19 20 21	 Q. And you're not a gynecologist? A. I'm not a gynecologist. Q. You're not a toxicologist? A. I am not a toxicologist. Q. You're not a mineralogist? A. I'm not a mineralogist. Q. Turning back to your CV, 	16 17 18 19 20 21 22	going to ask you that you so we don't run into problems here, I'm going to ask that you listen to my question. Okay? Do you understand that there is an allegation in this case and if you don't have an understanding, that's fine that there is asbestos in talc Johnson &

	Page 22		Page 24
1	THE WITNESS: Again, I wasn't	1	QUESTIONS BY MR. TISI:
2	asked to give an opinion about	2	Q. Yes.
3	asbestos.	3	Were you asked to provide an
4	QUESTIONS BY MR. TISI:	4	opinion as to whether or not the presence of
5	Q. I didn't ask whether you were	5	asbestos in talcum powder products is a
6	asked to give opinions.	6	biologically plausible mechanism for causing
7	Do you have any understanding	7	ovarian cancer?
8	if that's part of the record in this case?	8	MS. MILLER: Objection.
9	MS. MILLER: Same objections.	9	MR. LOCKE: Objection.
10	MR. LOCKE: Objection.	10	THE WITNESS: I was asked to
11	QUESTIONS BY MR. TISI:	11	provide an opinion on talcum powder
12	Q. Okay. That's fine.	12	products. And my opinion, based on
13	So again, I'm going to ask you	13	the epidemiologic literature, is that
14	to listen to my question.	14	there is no causal association.
15	So you're not offering an	15	So whatever is in talcum powder
16	opinion as to whether or not talc the	16	products would have come out in the
17	presence or the presence of asbestos	17	literature.
18	provides a biologically plausible mechanism	18	QUESTIONS BY MR. TISI:
19	for talcum powder product causing ovarian	19	Q. Okay. Would it be fair to say
20	cancer?	20	you've never published any commentary or
21	A. So I have not reviewed the	21	review of the literature on ovarian cancer
22	literature specifically about asbestos. I	22	and its causes generally? I apologize.
23	was not asked to provide an opinion about	23	A. I have never published a review
24	asbestos.	24	on ovarian cancer.
25	Q. Okay.	25	Q. Have you published a review on
	Page 23		Page 25
1	A. However, if asbestos was	1	any cancer?
2	present at all in a sufficient dose within	2	A. We have a review in press
3	talcum powder products, that would have come	3	sorry, in submission on malignancies after
4	out in the epidemiologic literature, which it	4	lung transplantation.
5	didn't.	5	Q. Does it focus on whether or not
6	Q. Okay.	6	talcum powder products is a risk factor for
7	A. Because the epidemiology shows	7	ovarian cancer?
8	that there is not a causal association	8	A. It does not.
9	between talcum powder and ovarian cancer.	9	Q. Have you ever published a
10	MR. TISI: I'm going to move to	10	commentary or review on the causes of ovarian
11	strike the answer as nonresponsive.	11	cancer?
12	QUESTIONS BY MR. TISI:	12	A. I have not.
	Q. My question was: Were you	13	Q. Have you published a commentary
13			
14	asked to offer a by the way, I'm not	14	or review on talcum powder products and its
14 15	asked to offer a by the way, I'm not getting any I said my question was:	15	or review on talcum powder products and its safety?
14 15 16	asked to offer a by the way, I'm not getting any I said my question was: Did you were you asked whether or not the	15 16	or review on talcum powder products and its safety? A. I have not.
14 15	asked to offer a by the way, I'm not getting any I said my question was: Did you were you asked whether or not the presence of asbestos would provide a	15	or review on talcum powder products and its safety? A. I have not. Q. Have you published any
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14 15 16 17 18 19 20	asked to offer a by the way, I'm not getting any I said my question was: Did you were you asked whether or not the presence of asbestos would provide a biologically plausible mechanism for talcum powder products causing ovarian cancer? The question is either yes or	15 16 17 18 19 20	or review on talcum powder products and its safety? A. I have not. Q. Have you published any commentary or review that deal with lifestyle or environmental cause of disease? MS. MILLER: Objection. THE WITNESS: That's a pretty broad question.
14 15 16 17 18 19 20 21	asked to offer a by the way, I'm not getting any I said my question was: Did you were you asked whether or not the presence of asbestos would provide a biologically plausible mechanism for talcum powder products causing ovarian cancer? The question is either yes or no.	15 16 17 18 19 20 21	or review on talcum powder products and its safety? A. I have not. Q. Have you published any commentary or review that deal with lifestyle or environmental cause of disease? MS. MILLER: Objection. THE WITNESS: That's a pretty
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7 (Pages 22 to 25)

Christian Merlo, M.D., MPH

Page 26 Page 28 1 and my clinical and research experience has 1 continue. So that environmental exposure can 2 dealt with epidemiology. And the 2 lead to an outcome over time. 3 epidemiology -- epidemiology usually is the 3 Q. But did you study the study of an exposure and how it relates to an 4 4 relationship between the exposure and the 5 outcome, and most of my papers and research 5 outcome, or was it primarily focused on lung has focused on exposures and how they lead to б 6 transplant? 7 7 outcomes. A. Well, I --8 Q. So what exposures, 8 MS. MILLER: Objection. 9 environmental or lifestyle exposures, have 9 QUESTIONS BY MR. TISI: 10 you investigated as related to what diseases? 10 Q. Let me rephrase the question. 11 MS. MILLER: Objection. 11 Let me withdraw and rephrase the question. THE WITNESS: Well, you'd have Did you do any causation 12 12 13 to get a little more specific about 13 analysis, including applying the Bradford what diseases we're talking about. Hill factors, to any exposure and any cancer 14 14 15 **OUESTIONS BY MR. TISI:** 15 in any of your publications? 16 So my question was a broad one, 16 A. So in general, when a study is performed, we try to do either a Bradford 17 because I don't see anything in your 17 published literature that falls in this 18 Hill or different aspects of Bradford Hill to 18 look at strength of associations or look at 19 category, but it may just be that I missed 19 20 20 specificity, to look at consistency, to look 21 Do you have any articles which 21 at dose response. Sometimes it's available; 22 deal with the relationship between lifestyle 22 sometimes it's not. and environmental factors and any kind of 23 23 I think it's a -- it's a --24 24 it's a framework that is often used in these cancer? 25 25 A. That's a different question. papers and in these studies, but it's not Page 27 Page 29 Okay. So the answer would be? 1 1 necessarily the only thing that's done in 2 Well, I would have to say that 2 them. 3 the risk of malignancy after lung 3 I understand. 4 transplantation does deal with that. 4 But if I looked at -- and I 5 5 Q. Is lung transplantation an appreciate that. These may touch on aspects 6 environmental or lifestyle? 6 of Brad Hill -- the Bradford Hill guidelines. 7 7 MS. MILLER: Objection. My question is: Did you ever, 8 THE WITNESS: So again, that's 8 in any of these papers, synthesize all of the 9 9 a pretty broad question. It can be -medical and scientific information available 10 QUESTIONS BY MR. TISI: 10 in order to do a Bradford Hill, complete 11 Bradford Hill, analysis of the relationship 11 Q. Okay. 12 between an exposure and a disease? 12 A. -- and it depends, because a MS. MILLER: Objection. lung transplant could be done for someone who 13 13 is born with a disease, say like cystic 14 THE WITNESS: Well, that's a 14 15 very, very, very broad question. 15 fibrosis, a genetic disease, or a lung 16 transplantation could be performed because 16 QUESTIONS BY MR. TISI: 17 someone has emphysema because they smoked all 17 Q. Uh-huh. their life. 18 I think that there are certain 18 19 papers in my CV that -- studies that we've 19 And so the environmental 20 done. It's the only study available that we 20 exposure and the personal health exposure is 21 did. 21 very, very different in those two 22 Okay. 22 populations. O. So, you know, it's impossible 23 Someone who's smoking may 23 to synthesize everything that's in the 24 smoke -- continue to smoke after their lung 24 25 transplant. It's not advised, but they may 25 medical literature if it's the only study

8 (Pages 26 to 29)

	Page 30		Page 32
1	that's done.	1	where you identified a risk factor for a
2	Q. Okay. So if I it wouldn't	2	disease?
3	be surprising if I looked at all these papers	3	A. I can.
4	and the word "Bradford Hill" does not appear	4	I mean, one of the first
5	in any of them?	5	studies that we did was to look at the risk
6	A. That wouldn't be something that	6	factors for developing resistant bacteria in
7	would appear	7	patients with cystic fibrosis.
8	Q. Okay.	8	Q. Okay. In that context, did you
9	A normally in a paper like	9	apply the Bradford Hill guidelines?
10	this.	10	MS. MILLER: Objection.
11	Q. Do any of these 78, 79 papers	11	THE WITNESS: Again, that's not
12	purport to provide any guidance or discussion	12	really something that would have been
13	of the definition or how to apply the	13	done in that study.
14	Bradford Hill criteria, a theoretic paper,	14	QUESTIONS BY MR. TISI:
15	for example?	15	Q. Okay.
16	MS. MILLER: Objection.	16	A. There's a there's a large
17	THE WITNESS: I don't have any	17	epidemiologic data set that the Cystic
18	theoretical papers describing a	18	Fibrosis Foundation has, and we utilized that
19	Bradford Hill analysis.	19	to identify factors that we thought might be
20	QUESTIONS BY MR. TISI:	20	important in seeing if those factors led to
21	Q. Okay. So just this is a	21	this resistant organism in that population.
22	slightly different question than before.	22	(Merlo Exhibit 3 marked for
23	Have you ever published	23	identification.)
24	research aimed at elucidating a possible	24	QUESTIONS BY MR. TISI:
25	causation between a putative risk factor and	25	Q. I'm going to mark your report
1	Page 31		Page 33
1	disease?	1	in this case.
2	A. Well, I think that can you	2	You issued a report in the
3	ask that again?	3	talcum powder products litigation?
4	Q. Yes.	4	A. I wrote a report.
5	Have you ever published	5	Q. Yes.
6	research aimed at elucidating possible	6	A. Yes, I did.
7	causation between a putative risk factor and	7	Q. Marked as Exhibit Number 3.
8	a disease?	"	A. Thank you.
9	MS. MILLER: I'm objecting.	9	Q. Uh-huh.
10	Objection.	10	I think we've also been
11	THE WITNESS: So it's not we	11	provided a supplemental materials reviewed
12	don't really approach epidemiologic	12	and considered paper which I'll mark as 3A,
13	studies trying to show causation with	13	which I assume is a supplement to your
14	risk factors.	14	report.
15	Sometimes there are studies	15	(Merlo Exhibit 3A marked for
16	that are that we do just to identify risk factors. And then once	16	identification.)
	identity risk factors. And then once	17	QUESTIONS BY MR. TISI:
17	· · · · · · · · · · · · · · · · · · ·		Q. Is this your report in this
17 18	risk factors are identified, then we	18	· · · · · · · · · · · · · · · · · · ·
17 18 19	risk factors are identified, then we could do follow-up studies to see if	19	case, and are these the supplemental
17 18 19 20	risk factors are identified, then we could do follow-up studies to see if they are actual factors or exposures	19 20	case, and are these the supplemental materials you reviewed as of today?
17 18 19 20 21	risk factors are identified, then we could do follow-up studies to see if they are actual factors or exposures that lead to a certain outcome.	19 20 21	case, and are these the supplemental materials you reviewed as of today? A. This looks about correct.
17 18 19 20 21 22	risk factors are identified, then we could do follow-up studies to see if they are actual factors or exposures that lead to a certain outcome. Sometimes that takes multiple	19 20 21 22	case, and are these the supplemental materials you reviewed as of today? A. This looks about correct. Q. Okay. Does this contain all
17 18 19 20 21 22 23	risk factors are identified, then we could do follow-up studies to see if they are actual factors or exposures that lead to a certain outcome. Sometimes that takes multiple studies to do that.	19 20 21 22 23	case, and are these the supplemental materials you reviewed as of today? A. This looks about correct. Q. Okay. Does this contain all the opinions you're prepared to offer in this
17 18 19 20 21 22	risk factors are identified, then we could do follow-up studies to see if they are actual factors or exposures that lead to a certain outcome. Sometimes that takes multiple	19 20 21 22	case, and are these the supplemental materials you reviewed as of today? A. This looks about correct. Q. Okay. Does this contain all

	Dago 24		Daga 26
	Page 34	_	Page 36
1	THE WITNESS: From the from	1	MS. MILLER: Objection.
2	the items that I've reviewed thus far.	2	THE WITNESS: I wouldn't say it
3	There may be other things that come up	3	that way.
4	in the literature, there may be other	4	QUESTIONS BY MR. TISI:
5	reports that are out, and I would like	5	Q. I understand you wouldn't say
6	to review those and	6	it that way, but in concept.
7	QUESTIONS BY MR. TISI:	7	A. In concept.
8	Q. But as of today, as of today,	8	That's the concept of all of
9	this is these are your opinions and these	9	those articles, or at least the majority of
10	are the bases of your opinions, correct?	10	them, that we're looking for we're looking
11	A. They are.	11	at an outcome, and we're looking for an
12	Q. Okay. Go to page 30 of your	12	exposure to see if that exposure leads to an
13	report, if you would. The second sentence of	13	outcome.
14	your report says, "While there is no single	14	And there are considerations
15	method for undertaking a causal assessment	15	that we consciously or subconsciously "we"
16	based on epidemiology, the criteria	16	meaning my research team and myself
17	formulated by Austin Bradford Hill are often	17	consciously and subconsciously
18	used and are considered the gold standard for	18	considerations that Bradford Hill put forth
19	evaluating causation once an association has	19	that we apply in there.
20	been identified."	20	Now, is it stated? No, but it
21	Do you see that?	21	wouldn't be stated in the papers. The
22	A. I do.	22	medical literature is not written that like
23	Q. Can you point to any articles	23	that.
24	on your CV where you applied the gold	24	Q. Okay. You mentioned and you
25	standard articulated on page 30 of your	25	give an example in your report; we're going
	Page 35		Page 37
1			
1	report?	1	to talk about it later primary pulmonary
2	report? MS. MILLER: Objection.	1 2	to talk about it later primary pulmonary hypertension and anorexigens.
	•		
2	MS. MILLER: Objection.	2	hypertension and anorexigens.
2	MS. MILLER: Objection. THE WITNESS: Well, again, most	2 3	hypertension and anorexigens. Do you remember the IPPHS
2 3 4	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic	2 3 4	hypertension and anorexigens. Do you remember the IPPHS study?
2 3 4 5	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an	2 3 4 5	hypertension and anorexigens. Do you remember the IPPHS study? A. I do.
2 3 4 5 6	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome.	2 3 4 5 6	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure
2 3 4 5 6 7	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford	2 3 4 5 6 7	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension,
2 3 4 5 6 7 8	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are	2 3 4 5 6 7 8	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension?
2 3 4 5 6 7 8 9	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are	2 3 4 5 6 7 8 9	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical
2 3 4 5 6 7 8 9	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not.	2 3 4 5 6 7 8 9	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a
2 3 4 5 6 7 8 9 10	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not. QUESTIONS BY MR. TISI:	2 3 4 5 6 7 8 9 10	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a significant exposure over a significant
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2 3 4 5 6 7 8 9 10 11 12 13	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not. QUESTIONS BY MR. TISI: Q. But whether they are I'm sorry, go ahead.	2 3 4 5 6 7 8 9 10 11 12 13	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a significant exposure over a significant amount of time with certain specific anorexigens is associated with pulmonary
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not. QUESTIONS BY MR. TISI: Q. But whether they are I'm sorry, go ahead. A. And in every study, we apply what we can Q. Right. A based on these suggestions	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a significant exposure over a significant amount of time with certain specific anorexigens is associated with pulmonary hypertension. Q. That's a different that's a different question than I'm asking, Doctor. So I asked you I asked you
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not. QUESTIONS BY MR. TISI: Q. But whether they are I'm sorry, go ahead. A. And in every study, we apply what we can Q. Right. A based on these suggestions put forth by Bradford Hill. Q. Is there any study in which you say, "We are undertaking" and I'm not	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a significant exposure over a significant amount of time with certain specific anorexigens is associated with pulmonary hypertension. Q. That's a different that's a different question than I'm asking, Doctor. So I asked you I asked you whether or not in your opinion exposure to anorexigens, in particular dexfenfluramine and fenfluramine, cause pulmonary
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MS. MILLER: Objection. THE WITNESS: Well, again, most of these articles are epidemiologic studies looking at an exposure and an outcome. Sometimes there are Bradford Hill considerations that are available, and sometimes there are not. QUESTIONS BY MR. TISI: Q. But whether they are I'm sorry, go ahead. A. And in every study, we apply what we can Q. Right. A based on these suggestions put forth by Bradford Hill. Q. Is there any study in which you say, "We are undertaking" and I'm not using these words specifically. "We are, in this article,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	hypertension and anorexigens. Do you remember the IPPHS study? A. I do. Q. Does, in your opinion, exposure to anorexigens cause pulmonary hypertension, primary pulmonary hypertension? A. The opinion of the medical community and part of that is that a significant exposure over a significant amount of time with certain specific anorexigens is associated with pulmonary hypertension. Q. That's a different that's a different question than I'm asking, Doctor. So I asked you I asked you whether or not in your opinion exposure to anorexigens, in particular dexfenfluramine and fenfluramine, cause pulmonary hypertension?
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	Page 38		Page 40
1		1	
1	QUESTIONS BY MR. TISI:	1	hypertension expert, so if you'd like to
2	Q. But I'm using the word "cause,"	2	discuss that, I would need to review the
3	so	3	medical literature.
4	A. And based on the medical	4	Q. Okay.
5	literature and based on clinical experience,	5	A. I can't agree or disagree with
6	if we're talking about those two anorexigens,	6	you.
7	the opinion of the medical community is that	7	Q. Well, you're not an ovarian
8	those cause primary pulmonary hypertension.	8	cancer expert, are you?
9	Q. Okay. Is that your opinion?	9	MR. LOCKE: Objection.
10	A. Yes.	10	THE WITNESS: I think I
11	Q. Okay. And we'll talk about it	11	answered that before.
12	again, but there was only one study,	12	QUESTIONS BY MR. TISI:
13	epidemiologic study, the IPPHS study,	13	Q. If you're not a primary
14	correct?	14	pulmonary hypertension expert, and that's a
15	A. You'd have to show me what	15	lung disease, are you a do you consider
16	you're referring to so we can look at it.	16	yourself an ovarian cancer expert?
17	Q. Yeah, it's the study by	17	MR. LOCKE: Objection.
18	Abenhaim. I believe it's footnote 77 of your	18	THE WITNESS: And what I said
19	report.	19	before is that there are certain
20	You know that study, don't you?	20	aspects of cancer that I do consider
21	A. I referenced it, but if you'd	21	myself an expert, and that is the care
22	like to discuss it	22	of patients who have cancer in the
23		23	intensive care unit.
	Q. I'm not going to discuss		
24	A I'd like to see it in front	24	QUESTIONS BY MR. TISI:
25	of me to discuss it.	25	Q. Okay. Do you hold yourself out
	Page 39		Page 41
1	Q. I will discuss it later and	1	to your colleagues as an expert in ovarian
2	I'll I will discuss it later, but I'm	2	cancer?
3	asking you: Do you know that there was only	3	MS. MILLER: Objection.
4	one study, epidemiologic study, performed?	4	MR. LOCKE: Objection.
5	MS. MILLER: Objection.	5	THE WITNESS: I'm going to have
6	THE WITNESS: I'm not aware of	6	to answer that very similarly because
7	that, but if we're going to talk about	7	there are certain aspects of
8	studies, then I would have like to	8	malignancies where I have taken care
9	have that in front of me.	9	of patients with ovarian cancer in the
10	OUESTIONS BY MR. TISI:	10	
10 11	QUESTIONS BY MR. TISI: O. I'm going to give it to you.	10 11	intensive care unit, who are very,
11	Q. I'm going to give it to you.	11	intensive care unit, who are very, very sick, who have been given
11 12	Q. I'm going to give it to you. I'm asking you whether there	11 12	intensive care unit, who are very, very sick, who have been given specific therapies for their ovarian
11 12 13	Q. I'm going to give it to you. I'm asking you whether there are any other studies, epidemiologic studies,	11 12 13	intensive care unit, who are very, very sick, who have been given specific therapies for their ovarian cancer, that I do consider myself an
11 12 13 14	Q. I'm going to give it to you. I'm asking you whether there are any other studies, epidemiologic studies, that you're aware of other than that study,	11 12 13 14	intensive care unit, who are very, very sick, who have been given specific therapies for their ovarian cancer, that I do consider myself an expert in taking care of.
11 12 13 14 15	Q. I'm going to give it to you. I'm asking you whether there are any other studies, epidemiologic studies, that you're aware of other than that study, which I will give you.	11 12 13 14 15	intensive care unit, who are very, very sick, who have been given specific therapies for their ovarian cancer, that I do consider myself an expert in taking care of. QUESTIONS BY MR. TISI:
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			1
	Page 42		Page 44
1	THE WITNESS: I would say	1	the market for quite some time, so it
2	internal medicine. I would say	2	would be very rare to see somebody who
3	pulmonary medicine. I would say	3	had a new diagnosis of pulmonary
4	critical care medicine. And all of	4	hypertension and an exposure to one of
5	those well, maybe no, actually	5	those medicines.
6	all of them encompass taking care of	6	When I'm evaluating someone
7	patients who can become or do become	7	with pulmonary hypertension, I
8	very, very sick with ovarian cancer	8	typically do ask them about the
9	and with specific and having	9	potential exposures to anorexigens.
10	specific expertise in taking care of	10	It's just on the list of things to do.
11	some of the medicines that they get	11	QUESTIONS BY MR. TISI:
12	that give them very, very specific	12	Q. Okay.
13	side effects.	13	A. And it should be part of the
14	QUESTIONS BY MR. TISI:	14	differential diagnosis.
15	Q. Have you also cared for	15	Q. So you're treating is it
16	patients with primary pulmonary hypertension?	16	fair to say that with ovarian cancer you're
17	A. I have.	17	treating the sequela of the disease, not
18	Q. Okay. So does that also make	18	making the diagnosis of the disease?
19	you an expert in the area of primary	19	A. No, I mean, I've probably made
20	pulmonary hypertension?	20	the diagnosis of disease one or two times in
21	A. So there are certain aspects of	21	my career.
22	primary pulmonary hypertension that I do	22	Q. Okay. And how long when you
23	consider myself an expert in. I do take care	23	say your career, how long is that?
24	of patients in the hospital who have primary	24	A. I graduated medical school in
25	pulmonary hypertension and also secondary	25	1996, so that's when I became a doctor.
			·
	Page 43		Page 45
1		1	
1 2	pulmonary hypertension.	1 2	Q. Okay. So can you you list
	pulmonary hypertension. But I'll just stop there.		Q. Okay. So can you you list the factors on page 30 of your report, the
2	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're	2	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of
2	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're taking care of a patient with primary	2 3	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of association, consistency, specificity,
2 3 4	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're taking care of a patient with primary pulmonary hypertension and they're exposed to	2 3 4	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of association, consistency, specificity, temporality, biologic gradient, plausibility,
2 3 4 5	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're taking care of a patient with primary pulmonary hypertension and they're exposed to anorexigens, or they're exposed to	2 3 4 5	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimentation, analogy.
2 3 4 5 6 7	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're taking care of a patient with primary pulmonary hypertension and they're exposed to anorexigens, or they're exposed to fenfluramine, dexfenfluramine, although those	2 3 4 5 6 7	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimentation, analogy. You list them all, correct?
2 3 4 5 6	pulmonary hypertension. But I'll just stop there. Q. Do you put when you're taking care of a patient with primary pulmonary hypertension and they're exposed to anorexigens, or they're exposed to	2 3 4 5 6	Q. Okay. So can you you list the factors on page 30 of your report, the Bradford Hill factors: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimentation, analogy.
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25 you said. 25	22	Q. Well, you used the term,		
l e contraction de la contract	22 23 24	Q. Well, you used the term,	24	

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1	QUESTIONS BY MR. TISI:	1	MS. MILLER: Objection.
2	Q. No.	2	MR. LOCKE: Objection.
3	My question is I want to be	3	MS. MILLER: Asked and answered
4	able to say I want to know whether or not	4	again.
5	your 2009 {sic} definitions of the Bradford	5	THE WITNESS: I mean, I don't
6	Hill factors no, let me phrase it a	6	even know what vast majority means,
7	different way.	7	but
8	Do you take any issue with any	8	QUESTIONS BY MR. TISI:
9	of the factors as described in the 1965	9	Q. I would say let's say more
10	articles and say, you know, "This concept is	10	than 50 percent.
11	outdated, I would define it differently," or	11	MS. MILLER: Objection to the
12	can we look at the 1965 factors as being the	12	definition of "vast majority" as more
13	ones you actually apply, the definitions you	13	than 50 percent.
14	use?	14	THE WITNESS: So, again, I
15	A. So I usually look at them as	15	don't know the numbers. We can go
16	considerations and not factors.	16	through them if you'd like
17	Q. Okay.	17	QUESTIONS BY MR. TISI:
18	A. And in general, the way it's	18	Q. Okay.
19	written is how I interpret and move through	19	A and get a percentage, but
20	when I evaluate evidence.	20	Q. I think I think fine.
21	Q. Okay. Now, almost every one of	21	On your CV at the bottom of
22	your 79 peer-reviewed papers going back to	22	page 8 you've written several book chapters,
23	your CV have to do with lung disease of one	23	correct?
24	kind or another, correct?	24	A. Book chapters, sure.
25	A. There are a few that deal with	25	Q. Do any deal with cancer?
23	A. There are a few that dear with	23	Q. Do any dear with cancer:
	Page 51		Page 53
1	Page 51 certain conditions that may not involve lung	1	Page 53 A. I don't specifically recall,
1 2		1 2	
	certain conditions that may not involve lung		A. I don't specifically recall,
2	certain conditions that may not involve lung disease.	2	A. I don't specifically recall, but in this First Aid for Internal Medicine
2	certain conditions that may not involve lung disease. Q. The vast majority are, correct?	2 3	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have
2 3 4	certain conditions that may not involve lung disease. Q. The vast majority are, correct? A. I mean, I haven't tallied up.	2 3 4	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have been some some cancer topics in there.
2 3 4 5	certain conditions that may not involve lung disease. Q. The vast majority are, correct? A. I mean, I haven't tallied up. I don't know percentages, but there are	2 3 4 5	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have been some some cancer topics in there. Q. Do any deal with the
2 3 4 5 6	certain conditions that may not involve lung disease. Q. The vast majority are, correct? A. I mean, I haven't tallied up. I don't know percentages, but there are articles in there that involve other disease	2 3 4 5 6	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have been some some cancer topics in there. Q. Do any deal with the methodology for assessing causation?
2 3 4 5 6 7	certain conditions that may not involve lung disease. Q. The vast majority are, correct? A. I mean, I haven't tallied up. I don't know percentages, but there are articles in there that involve other disease states.	2 3 4 5 6 7	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have been some some cancer topics in there. Q. Do any deal with the methodology for assessing causation? A. Book chapters on the
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2 3 4 5 6 7 8	certain conditions that may not involve lung disease. Q. The vast majority are, correct? A. I mean, I haven't tallied up. I don't know percentages, but there are articles in there that involve other disease states. Q. The vast would you agree that the vast majority of your published	2 3 4 5 6 7 8	A. I don't specifically recall, but in this First Aid for Internal Medicine Boards there may have been there may have been some some cancer topics in there. Q. Do any deal with the methodology for assessing causation? A. Book chapters on the methodology assessing causation? Not that I'm aware of.
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	Page 54		Page 56
1	Do any of your book chapters	1	Q. Any mention of cancer of any
2	deal in any way with talcum powder?	2	kind?
3	A. No, they don't.	3	A. There is not.
4	Q. Okay. Prior to finalizing your	4	Q. Okay. Now, your CV also
5	report in February of 2019, two months ago,	5	mentions that you currently run the adult
6	had you ever publicly expressed your opinion	6	clinic for a cystic fibrosis center for the
7	about talcum powder and ovarian cancer?	7	past four years, since 2015?
8	A. No.	8	A. So I'm the associate program
9	Q. Now, we talked about the fact	9	director for our adult cystic fibrosis
10	that you were an associate professor at Johns	10	program at Johns Hopkins.
11	Hopkins critical care.	11	Q. I'm sorry, I promoted you.
12	You've been associate professor	12	A. Thank you. It's very difficult
13	for how many years?	13	to get promoted at Hopkins, so
14	A. I'd have to look back at my CV.	14	Q. Maybe someday.
15	It looks like I was promoted to associate	15	You've held that position since
16	professor in 2015.	16	2015?
17	Q. So you've been associate	17	A. Where are you referring
18	professor for four years?	18	where are we looking now?
19	A. That's correct.	19	Q. Page 2.
20	(Merlo Exhibit 4 marked for	20	A. Page 2.
21	identification.)	21	Q. I'm sorry, the first page.
22	QUESTIONS BY MR. TISI:	22	A. First page.
23	Q. Okay. I want to show you	23	Q. It says, "2015 to present,
24	Exhibit Number 4, which is the your bio on	24	associate program director, Adult Cystic
25	your web page for the critical care division	25	Fibrosis Center."
	Page 55		Page 57
1	of Hopkins.	1	A. 2015, yes, that's correct.
2	That's your picture, correct?	2	Q. So for four years you've been
3	A. That is my picture.	3	an associate professor. For four years
4	Q. Does it list your expertise as	4	you've been an associate program director for
5	cystic fibrosis, lung transplant, pulmonary	5	the Cystic Fibrosis Clinic.
6	and critical care medicine?	6	What is cystic fibrosis?
7	A. Are you referring to up top	7	A. Cystic fibrosis is a genetic
8	Q. Yes.	8	disease that some people are born with it,
9	A to the right?	9	and it leads to an abnormal chloride channel
10	Expertise: cystic fibrosis,	10	in epithelial-lined cells in
11	lung transplant, pulmonary and critical care	11	epithelial-lined organs in the body. In the
12	medicine	12	lungs it leads to a buildup of secretions and
13	Q. Yes.	13	progressive lung disease that oftentimes
14	A pulmonary?	14	leads to death or lung transplantation.
15	Q. Yeah.	15	It leads to sinus disease. It
16	A. That's what it says.	16	leads to liver disease. It leads to problems
17	Q. Does it also say your research	17	in the gastrointestinal tract. It leads to
18	interests are HIV-related pulmonary disease,	18	infertility in men. It leads to women
19	outcomes after lung transplantation, clinics	19	oftentimes having difficulties getting
20	and clinical cystic fibrosis?	20	pregnant.
21	A. That's what it says.	21	And, unfortunately, there is no
22	Q. Okay. Any mention of ovarian	22	cure for it.
23	cancer?	23	Q. Is it cancer?
24	A. There is no mention of ovarian	24	A. No.
25	cancer.	25	(Merlo Exhibit 5 marked for

15 (Pages 54 to 57)

	Page 58		Page 60
1	identification.)	1	THE WITNESS: On this website,
2	QUESTIONS BY MR. TISI:	2	it's listed that my clinical interests
3	Q. Okay. If I could show you	3	are cystic fibrosis and lung
4	Exhibit Number 5, which is the web page from	4	transplantation.
5	the Adult Clinic for the Cystic Fibrosis	5	But again, I have no idea who
6	Center.	6	put this together. I don't know if
7	A. I look much younger there.	7	they were my colleagues or they're
8	Q. We all look younger, Doctor, at	8	some random person at Hopkins did
9	different times.	9	this.
10	This is your web page from the	10	QUESTIONS BY MR. TISI:
11	Johns Hopkins Adult Clinic for Cystic	11	Q. Okay. Did you ever ask to take
12	Fibrosis?	12	it down?
13	A. It's a web page from Hopkins.	13	A. No.
14	I don't know whose web page it is. I didn't	14	Q. Okay. Would you ever tell
15	make it.	15	somebody, "let's put in my clinical interests
16	Q. And it lists you and it an	16	here treatment of ovarian cancer"?
17	associate professor of medicine and	17	MS. MILLER: Objection.
18	epidemiology, correct? Right under your	18	THE WITNESS: You know, there
19	name?	19	are lots of websites out there, and if
20	A. Where are you referring to?	20	I spent my time just looking at
21	Q. Right under your name.	21	websites, I wouldn't be able to get
22	A. I see.	22	anything done.
23	Associate professor of medicine	23	So Hopkins has a lot of web
24	and epidemiology, yes.	24	presence, and we oftentimes don't know
25	Q. And I will talk about the	25	what goes up there.
1	Page 59 epidemiology portion of it, but right now let	1	Page 61 QUESTIONS BY MR. TISI:
2	me ask you this: The research interests	2	Q. I'll just start: Now that
3	listed here are outcomes of adults with	3	you've seen it, would you go back to your
4	cystic fibrosis infected with multiple	4	colleagues and say, "You know something, I'm
5	antibiotic-resistant pneumonias and I	5	an expert in ovarian cancer; you need to list
6	don't even know how to pronounce that last	6	that"?
7	word.	7	MS. MILLER: Objection.
8	Could you tell me?	8	MR. LOCKE: Objection.
9	A. Pseudomonas aeruginosa.	9	THE WITNESS: No.
10	Q. Okay. Diagnosis of management	10	QUESTIONS BY MR. TISI:
11	of pulmonary arterial venous malformations,	11	Q. Okay.
12	correct?	12	A. Not on a website.
14			
13	A. I do see that.	13	Q. Now let's talk a bit about your
	A. I do see that.Q. Are there areas of your	13 14	
13			Q. Now let's talk a bit about your
13 14 15 16	Q. Are there areas of your	14	Q. Now let's talk a bit about your appointment as associate professor of
13 14 15 16 17	Q. Are there areas of your research interests?A. Those are things that I've been interested in in research, among other	14 15	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns
13 14 15 16 17	Q. Are there areas of your research interests?A. Those are things that I've been interested in in research, among other things. I don't know who put this together	14 15 16	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health.
13 14 15 16 17 18	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but	14 15 16 17	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well,
13 14 15 16 17 18 19 20	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but that's part of my research interests, sure.	14 15 16 17 18	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well, right?
13 14 15 16 17 18 19 20 21	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but that's part of my research interests, sure. Q. Your clinical interests, at	14 15 16 17 18 19 20 21	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well, right? A. Can you say that one more time?
13 14 15 16 17 18 19 20 21	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but that's part of my research interests, sure. Q. Your clinical interests, at least as described by your colleagues at	14 15 16 17 18 19 20	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well, right? A. Can you say that one more time? Q. Yeah. Do you hold are you have you been appointed as associate professor of
13 14 15 16 17 18 19 20 21 22 23	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but that's part of my research interests, sure. Q. Your clinical interests, at least as described by your colleagues at Johns Hopkins, are cystic fibrosis and lung	14 15 16 17 18 19 20 21 22 23	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well, right? A. Can you say that one more time? Q. Yeah. Do you hold are you have you been appointed as associate professor of medicine and epidemiology at the Johns
13 14 15 16 17 18 19 20 21	Q. Are there areas of your research interests? A. Those are things that I've been interested in in research, among other things. I don't know who put this together or where they got those things, so but that's part of my research interests, sure. Q. Your clinical interests, at least as described by your colleagues at	14 15 16 17 18 19 20 21 22	Q. Now let's talk a bit about your appointment as associate professor of medicine and epidemiology at the Johns Hopkins School of Public Health. You held that position as well, right? A. Can you say that one more time? Q. Yeah. Do you hold are you have you been appointed as associate professor of

16 (Pages 58 to 61)

	Page 62		Page 64
1	professor of epidemiology at the Johns	1	for you, this and that.
2	Hopkins Bloomberg School of Public Health.	2	So there's no way for me to
3	Q. Now, would you agree that your	3	parse out whether it's 20/80, 80/20,
4	primary appointment, in terms of the time you	4	50/50. It's all related.
5	spend, is in the pulmonary and critical care	5	QUESTIONS BY MR. TISI:
6	area as opposed to the School of Public	6	Q. Do you have an office over at
7	Health?	6 7 8	the School of Public Health?
8	MS. MILLER: Objection.	8	A. I don't have a physical space
9	THE WITNESS: So it depends.	9	over at the School of Public Health.
10	It depends on the time of year. It	10	Q. Okay.
11	depends on year to year. There may be	11	A. I do have I do have lab
12	more there may be some years where	12	meetings that are located over at the School
13	I spend much more time over at the	13	of Public Health or in other epidemiologic
14	School of Public Health in	14	areas that are outside the School of
15	collaborating with the epidemiologists	15	Medicine.
16	over there. There may be years or	16	Q. Now, there are professors and
17	months where I spend more time in the	17	assistant professors who work only in the
18	hospital. There's no way for me to	18	Bloomberg School of Public Health, correct?
19	really parse it out.	19	A. There are faculty that are only
20	QUESTIONS BY MR. TISI:	20	appointed their only appointment is within
21	Q. If you were to if you were	21	the School of Public Health, that is correct.
22	to let's take a year, but we could take	22	Q. And they spend all their
23	four years you've been associate professor.	23	professional time in that school in the
24	Let's do the big picture first.	24	School of Public Health?
25	Over the four years you have	25	A. Not necessarily.
			·
	Page 63		Page 65
1	1 (77 1) 1 1 1 1 1	l .	
Ψ.	been at Hopkins, and you had to give me an	1	Q. Okay.
2	estimate of the time you spend over at the	1 2	Q. Okay.A. Because Hopkins is a very
		1	· · · · · · · · · · · · · · · · · · ·
2	estimate of the time you spend over at the	2	A. Because Hopkins is a very
2 3	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic,	2 3	A. Because Hopkins is a very collaborative place, and even though a
2 3 4	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public	2 3 4	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary
2 3 4 5	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you	2 3 4 5	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't
2 3 4 5 6	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public	2 3 4 5 6	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend
2 3 4 5 6 7	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you	2 3 4 5 6 7	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific
2 3 4 5 6 7 8	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years?	2 3 4 5 6 7 8	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place.
2 3 4 5 6 7 8 9	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection.	2 3 4 5 6 7 8	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now
2 3 4 5 6 7 8 9	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday	2 3 4 5 6 7 8 9 10 11	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place.
2 3 4 5 6 7 8 9 10	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may	2 3 4 5 6 7 8 9 10	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full
2 3 4 5 6 7 8 9 10 11	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday	2 3 4 5 6 7 8 9 10 11	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public
2 3 4 5 6 7 8 9 10 11 12 13	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients	2 3 4 5 6 7 8 9 10 11 12 13	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct?
2 3 4 5 6 7 8 9 10 11 12 13	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but	2 3 4 5 6 7 8 9 10 11 12 13	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at
2 3 4 5 6 7 8 9 10 11 12 13 14 15	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping us with our analysis and study	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate professors at the Bloomberg School of Public
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping us with our analysis and study designs.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate professors at the Bloomberg School of Public Health?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping us with our analysis and study designs. There may be times when I'm	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate professors at the Bloomberg School of Public Health? A. There are full-time associate
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping us with our analysis and study designs. There may be times when I'm seeing a patient in clinic, and then I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate professors at the Bloomberg School of Public Health? A. There are full-time associate professors at the Bloomberg School of Public Health?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	estimate of the time you spend over at the Bloomberg School of Public Health as opposed to at the pulmonary and critical care medicine or the cystic fibrosis clinic, basically the Bloomberg School of Public Health and everything else, how would you divide the time over the past four years? MR. LOCKE: Objection. THE WITNESS: I think it's impossible to divide it because I may go to clinic on, say, Wednesday Thursday and see transplant patients and see cystic fibrosis patients, but then Friday I'll spend working on a research project with one of my fellows where we have some of the epidemiologists and analysts helping us with our analysis and study designs. There may be times when I'm seeing a patient in clinic, and then I call one of my colleagues over at the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. Because Hopkins is a very collaborative place, and even though a faculty member may not have a primary appointment within a school, that doesn't necessarily mean that that person would spend his or her time only in one specific building. Q. Now A. It's a very fluid place. Q. Okay. But there are full professors at the Bloomberg School of Public Health, correct? A. There are full professors at the Johns Hopkins Bloomberg School of Public Health. Q. And there are full associate professors at full-time associate professors at the Bloomberg School of Public Health? A. There are full-time associate professors at the Bloomberg School of Public Health?

17 (Pages 62 to 65)

	Page 66		Page 68
1	QUESTIONS BY MR. TISI:	1	QUESTIONS BY MR. TISI:
2	Q. I'm going to provide you as	2	Q. And it's used at Hopkins,
3	Exhibit Number 6 the faculty directory at the	3	right?
4	Bloomberg School of the epidemiology	4	A. Dr. Gordis' textbook, when I
5	department at the Bloomberg School of Public	5	took the course, was used at Hopkins.
6	Health.	6	I'm not sure what textbook is
7	MS. MILLER: Are you providing	7	used for that specific class today.
8	it to the rest of us or just to him?	8	Q. And do you know a Dr and I
9	MR. TISI: I apologize,	9	can't pronounce his name Moyses Szklo?
10	Counsel. I didn't do it quick enough	10	A. Yeah, and I I'm not sure how
11	for you.	11	to pronounce his last his last name
12	MS. MILLER: Thank you.	12	either.
13	MR. TISI: Actually, may I have	13	Q. He's a full professor he's a
14	one copy back?	14	full professor of epidemiology, correct?
15	MS. MILLER: Totally.	15	A. Moyses Szklo.
16	MR. TISI: Thank you.	16	Do I know him? No. I know of
17	MS. MILLER: Susan and I can	17	him.
18	share.	18	Q. Do you know that he took over
19	QUESTIONS BY MR. TISI:	19	the editing of the book when on
20	Q. I'll represent to you, Doctor,	20	epidemiology when Dr. Gordis passed?
21	that this is the faculty directory of the	21	A. I don't know that.
22	epidemiology department, Bloomberg School of	22	Q. Okay. Both of those
23	Public Health. It was taken off the website	23	epidemiologists I mentioned, Dr. Szklo and
24	before your deposition was moved last week,	24	Dr. Gordis, were full-time professors at
25	so April 3rd of 2019.	25	the or in Dr. Szklo's case still is a
	Page 67		Page 69
1	Do you see that?	1	full-time professor at the Bloomberg School
2	A. I do.	2	of Public Health, correct?
3	MR. LOCKE: Objection.	3	A. It says right here that he's a
4	QUESTIONS BY MR. TISI:	4	full-time professor.
5	Q. And it lists full-time faculty.	5	Q. Have you spoke to Dr. Szklo?
6	Do you see that?	6	MS. MILLER: Objection.
7	A. I don't	7	THE WITNESS: This Dr. Szklo?
8	Q. See on the top top right	8	Yeah.
9	here, full time?	9	QUESTIONS BY MR. TISI:
10	A. I do see that.	10	Q. Szklo, is that how you
11	Q. And if you look through here	11	pronounce it?
12	first of all, actually on the front page is a	12	A. I think so.
13	gentleman by the name of Leon Gordis.	13	Q. Okay.
14	Who is Dr. Gordis?	14	A. I'm not sure. Again, I know of
15	A. Leon Gordis was an	15	him, and I don't think I've ever met him.
16	epidemiologist who when I took	16	Hopkins is a big place.
17	Epidemiology I at the School of Public	17	Q. Now, I've it's also
	Health, he taught the course.	18	collaborative, right?
18		1 1 0	A. It is.
18 19	Q. And he is he wrote a	19	
18 19 20	Q. And he is he wrote a textbook on epidemiology, correct?	20	Q. You told me it's very
18 19 20 21	Q. And he is he wrote a textbook on epidemiology, correct? MS. MILLER: Objection.	20 21	Q. You told me it's very collaborative.
18 19 20 21 22	Q. And he is he wrote a textbook on epidemiology, correct? MS. MILLER: Objection. THE WITNESS: I know of a	20 21 22	Q. You told me it's very collaborative.A. It is. But it's a very big
18 19 20 21 22 23	Q. And he is he wrote a textbook on epidemiology, correct? MS. MILLER: Objection. THE WITNESS: I know of a textbook that he wrote. He may have	20 21 22 23	Q. You told me it's very collaborative.A. It is. But it's a very big place.
18 19 20 21 22	Q. And he is he wrote a textbook on epidemiology, correct? MS. MILLER: Objection. THE WITNESS: I know of a	20 21 22	Q. You told me it's very collaborative.A. It is. But it's a very big

		1	
	Page 70		Page 72
1	you've I mean, is there anything that	1	Do you see that?
2	would prevent you from speaking to Dr. Szklo?	2	A. I do.
3	MS. MILLER: Objection.	3	Q. And if you click on that, on
4	THE WITNESS: If I had a reason	4	the computer, you get the second page of this
5	to. But there are many people on here	5	document, which is a course catalog.
6	that I actually have collaborated	6	Do you see that?
7	with, so	7	A. I do.
8	QUESTIONS BY MR. TISI:	8	Q. And it says, "No results."
9	Q. Okay.	9	A. Okay.
10	A. In particular, Dr. Kirk right	10	Q. Okay. Do you teach any courses
11	here, I think he's on many of my articles.	11	in epidemiology?
12	So, you know, it just depends.	12	A. I do. I teach two.
13	If there was something specific	13	Q. Which ones do you teach?
14	that I thought that we could work on or I had	14	A. I teach a course called the
15	a question, I'd just e-mail or call him right	15	Science of Clinical Investigation and
16	up and go over there.	16	Q. And what is I'm sorry.
17	Q. Good to know. We'll talk about	17	A. And that and the specific
18	that.	18	aspect of that is the design of clinical
19	(Merlo Exhibit 7 marked for	19	studies. We have both an in-person class and
20	identification.)	20	an online course.
21	QUESTIONS BY MR. TISI:	21	Q. Okay. And is any part of that
22	Q. I showed you Exhibit 4, which	22	course the discussion of the application of
23	was your personal web page from Johns Hopkins	23	the Bradford Hill framework to answering a
24	pulmonary critical care department.	24	question of causation?
25	Now let me show you the web	25	MS. MILLER: Objection.
	Page 71		Page 73
1	page from the Johns Hopkins department of	1	THE WITNESS: I don't know that
2	epidemiology, which I'd like to have marked	2	I have a specific slide that would say
3	as Exhibit Number 7.	3	Bradford there may be. I'd have to
4	Do you see that?	4	look back. But we certainly do talk
5	A. I see a faculty directory for	5	about causality.
6	Johns Hopkins Bloomberg School of Public	6	QUESTIONS BY MR. TISI:
7	Health.	7	Q. And one of the things do you
8	Q. All right. And underneath it	8	have slides that you use in that course?
9	says, "department affiliation." It says,	9	A. I have slides, and other
10	"school of medicine, primary" and	10	instructors have slides.
11	"epidemiology, joint."	11	Q. Do you have any objection to
12	Do you see that?	12	producing it to us?
13	A. I do.	13	MS. MILLER: I don't think
14	Q. What does it mean to be	14	that's his decision whether to object
15	primary, and what does it mean to be joint?	15	or not. I think that would be our
16	A. I actually have no idea. I	16	objection.
17	know that my first appointment at Johns	17	MR. TISI: I'm asking whether
18	Hopkins was with the School of Medicine, and	18	he has any objection.
19	then because I was teaching courses over at	19	MS. MILLER: That's not an
20	the School of Public Health and collaborating	20	appropriate question for the witness.
21	with some of the investigators over there, we	21	MR. TISI: I understand.
	talked about another appointment, which I	22	Objection.
22	tarked about another appointment, which i	1	
22 23	guess would be called a joint appointment.	23	MS. MILLER: But if it is
23 24	guess would be called a joint appointment. Q. Okay. It says here, "View	24	appropriate or not
23	guess would be called a joint appointment.		

19 (Pages 70 to 73)

	Page 74		Page 76
1	Objection.	1	talcum powder?
2	MS. MILLER: No, I'm going to	2	A. No, although I think it would
3	speak.	3	be a very fun exercise during that class.
4	MR. TISI: No, you're not.	4	Q. Okay. When is the next time
5	MS. MILLER: You're talking	5	you give the class?
6	Yes, I am.	6	A. We give the in-person version
7	MR. TISI: No, you're not.	7	in the fall, and we give the online version
8	MS. MILLER: Really? You want	8	usually in the wintertime.
9	to watch?	9	Q. Have you ever taught strategies
10	MR. TISI: Let's call the	10	for investigating the causes of cancer?
11	judge. Let's go off the record and	11	A. Can you ask that again?
12	call the judge.	12	MS. MILLER: Objection.
13	MS. MILLER: We're going to off	13	QUESTIONS BY MR. TISI:
14	the record and call the judge and tell	14	Q. Yes.
15	her that you asked the witness if he	15	Have you ever taught any
16	has any objection to producing a	16	strategies for investigating the causes of
17	document	17	cancer?
18	MR. TISI: Yes, does he have	18	MS. MILLER: Same objection.
19	personal	19	THE WITNESS: So I would have
20	MS. MILLER: and won't let	20	to say that in certain now, for
21	me talk about the objection. That is	21	instance, in this in this
22	not an appropriate question.	22	investigation looking at malignancies
23	MR. TISI: Does he have does	23	after a transplant that we did, yeah,
24	he have any do you have any	24	certainly we talked about aspects of
25	objection	25	how to evaluate the potential
			r
	Page 75		Page 77
1	MS. MILLER: That is not an	1	exposure/outcome relationship.
2	appropriate question. I'm instructing	2	QUESTIONS BY MR. TISI:
3	you not to answer.	3	Q. What article is that, so I can
4	THE WITNESS: You can take the	4	11 - :4 9
		4	look it up?
5	course.	5	A. I'm trying to find the number
5 6	course. QUESTIONS BY MR. TISI:		•
		5	A. I'm trying to find the number here. 65. Q. Thank you.
6	QUESTIONS BY MR. TISI:	5 6	A. I'm trying to find the number here. 65.
6 7 8	QUESTIONS BY MR. TISI: Q. I'd love to take the course,	5 6 7	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry.
6 7 8 9 10	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the	5 6 7 8	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo
6 7 8 9 10 11	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's	5 6 7 8 9 10 11	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation."
6 7 8 9 10	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree?	5 6 7 8 9 10	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo
6 7 8 9 10 11	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah.	5 6 7 8 9 10 11	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation."
6 7 8 9 10 11 12 13	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI:	5 6 7 8 9 10 11 12	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or
6 7 8 9 10 11 12	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a	5 6 7 8 9 10 11 12 13	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association
6 7 8 9 10 11 12 13 14 15	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that	5 6 7 8 9 10 11 12 13 14	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian
6 7 8 9 10 11 12 13 14 15 16 17	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a	5 6 7 8 9 10 11 12 13 14 15	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer?
6 7 8 9 10 11 12 13 14 15	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second	5 6 7 8 9 10 11 12 13 14 15	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection.
6 7 8 9 10 11 12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second course. What is the second course?	5 6 7 8 9 10 11 12 13 14 15 16 17	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep your voice up, please, Mr. Tisi?
6 7 8 9 10 11 12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second course. What is the second course?	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep your voice up, please, Mr. Tisi? MR. TISI: Sure. You know, I'd
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second course. What is the second course? A. So there's an online version	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep your voice up, please, Mr. Tisi? MR. TISI: Sure. You know, I'd have to that's the first time I've
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second course. What is the second course? A. So there's an online version and there's an in-person version, and	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep your voice up, please, Mr. Tisi? MR. TISI: Sure. You know, I'd have to that's the first time I've ever heard you say that.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	QUESTIONS BY MR. TISI: Q. I'd love to take the course, Doctor. A. Great. Q. I'd love to learn about the levels of evidence. But let's MS. SHARKO: Should we agree? MS. MILLER: Yeah. QUESTIONS BY MR. TISI: Q. Let's we're going on a break, we're going to call the judge on that question. You said you taught a second course. What is the second course? A. So there's an online version and there's an in-person version, and sometimes they're a little bit different;	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I'm trying to find the number here. 65. Q. Thank you. What is the title of the article? I'm sorry. A. "Risk Factors for De Novo Malignancy Following Lung Transplantation." Q. Okay. Do you know whether or not ovarian cancer there's an association between lung transplantation and ovarian cancer? MS. MILLER: Objection. MS. SHARKO: Could you keep your voice up, please, Mr. Tisi? MR. TISI: Sure. You know, I'd have to that's the first time I've ever heard you say that. MS. SHARKO: I know. I'm

	Page 78		Page 80
1	far.	1	Q. Okay. Are there times that
2	THE WITNESS: I would have to	2	you've consulted on legal cases but not been
3	specifically look back at that	3	an expert?
4	article. I don't specifically recall.	4	MS. MILLER: Objection.
5	QUESTIONS BY MR. TISI:	5	THE WITNESS: Well, being asked
6	Q. Okay. Now, could you go to	6	to consult on a case, I've been
7	Appendice C of your report? Your report	7	considered an expert. There have been
8	which I believe is Exhibit Number 3.	8	cases that I've turned down because I
9	It's the list of cases that you	9	felt like my opinion or I felt like
10	have testified to over the past four years.	10	there wasn't there wasn't something
11	A. Okay.	11	that I could support or there wasn't
12	Q. And that's exhibit and	12	something that was something that I
13	that's Exhibit 3 and that's Exhibit 3,	13	could provide an opinion about.
14	correct?	14	QUESTIONS BY MR. TISI:
15	A. Yes, correct.	15	Q. Could you give me an estimate,
16	Q. I want to have I believe	16	if you would I'll talk about your work on
17	counsel provided us with a supplemental	17	behalf of Johnson & Johnson in this case, but
18	exhibit to that. I'll make it 3B because I	18	putting that aside for a moment, on the legal
19	think we have a 3.	19	matters in which you have been either
20	(Merlo Exhibit 3B marked for	20	identified as an expert or consulted,
21	identification.)	21	approximately how much have you made the past
22	MS. MILLER: You're talking	22	year, money?
23	about the fact that we didn't know	23	A. Well, first off, I would like
24	what court one of the cases was in or	24	to clarify that I'm not working on behalf of
25	something.	25	Johnson & Johnson.
	Page 79		Page 81
1	MR. TISI: Honestly, I don't	1	And I would have to look at my
2	know. I don't have any idea.	2	tax statement because I don't recall.
3	MS. MILLER: He's talking about	3	0 111 1 010 0000
4	.4 •		Q. Was it more than \$10,000?
-	this.	4	A. Probably.
5	MR. TISI: Okay. This is just	4 5	
			A. Probably.Q. More than 20?A. Probably.
5 6 7	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It	5	A. Probably. Q. More than 20?
5 6	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going	5 6	A. Probably.Q. More than 20?A. Probably.
5 6 7 8 9	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just	5 6 7 8 9	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40?
5 6 7 8 9	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing.	5 6 7 8 9 10	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably.
5 6 7 8 9 10	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't	5 6 7 8 9 10 11	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50?
5 6 7 8 9 10 11 12	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that.	5 6 7 8 9 10 11 12	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably.
5 6 7 8 9 10 11 12 13	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay.	5 6 7 8 9 10 11 12 13	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60?
5 6 7 8 9 10 11 12 13	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI:	5 6 7 8 9 10 11 12 13 14	 A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably.
5 6 7 8 9 10 11 12 13 14	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Okay. So you've given	5 6 7 8 9 10 11 12 13 14 15	A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60? A. In the last year, probably, yes.
5 6 7 8 9 10 11 12 13 14 15	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Okay. So you've given testimony in the past four years 20 times?	5 6 7 8 9 10 11 12 13 14 15	A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60? A. In the last year, probably, yes. Q. More than 70?
5 6 7 8 9 10 11 12 13 14 15 16 17	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Okay. So you've given testimony in the past four years 20 times? A. That seems about I mean, I	5 6 7 8 9 10 11 12 13 14 15 16 17	A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60? A. In the last year, probably, yes. Q. More than 70? A. Maybe.
5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Okay. So you've given testimony in the past four years 20 times? A. That seems about I mean, I don't know if it's exactly 20, but	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60? A. In the last year, probably, yes. Q. More than 70? A. Maybe. Q. Okay. What about the year
5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. TISI: Okay. This is just a clerical thing, Doctor. Here's provided to us. It was a supplement. I'm not even going to spend any time with it. It's just a housekeeping thing. MS. MILLER: Yeah, I don't think Dr. Merlo was involved in that. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Okay. So you've given testimony in the past four years 20 times? A. That seems about I mean, I don't know if it's exactly 20, but whatever	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Probably. Q. More than 20? A. Probably. Q. More than 30? A. Probably was more than 30. Q. More than 40? A. Probably. Q. More than 50? A. Probably. Q. More than 60? A. In the last year, probably, yes. Q. More than 70? A. Maybe. Q. Okay. What about the year prior?
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21 (Pages 78 to 81)

1 MS. MILLER: Objection. He said he doesn't remember. 2 said he doesn't remember. 3 MR. TISI: I can – I can ask these questions. 4 these questions. 5 THE WITNESS: Again, I'd probably have to look at my tax records. I'd be just guessing. 8 QUESTIONS BY MR. TISI: 9 Q. Would it be more than 10? 10 A. I'd be guessing. 11 Q. Okay. Over the past four years, have you been provided — have you perspective. In litigation fairly consistently? Is that something that you do? 15 MS. MILLER: Objection. 16 THE WITNESS: It's not something I keep track of, I have of how much or how little. 17 something I keep track of, I have of how much or how little. 20 Q. Now in this case, in 2019, have you been now have the individed as an expert or given any depositions or signing any reports over the past three, four months? 4 Q. You don't remember. 9 Q. Okay. In this case we have you you records, Mich I'll mark in a minute. 11 A. I sec that, yes. 2 Q. Did you do any work for Q. Did you do any work for Johnson & Johnson for your time prior to December of 2018? A. Not that I recall. 4 Q. Okay. Wh. MILLER: Let us know when it's a good time for a break. 4 Q. UESTIONS BY MR. TISI: 4 Q. Distance and Johnson Miller & Johnson & Jo			1	
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## these questions. ## THE WITNESS: Again, I'd probably have to look at my tax freedrish have to look at my tax freedrish have to look at my tax freedrish. The witness has been end from the first again the first again the first again that freedrish have to look at my tax freedrish freedrish have to look at my tax freedrish freedrish. ## Again, I just would like to Johnson & Johnson	1	MS. MILLER: Objection. He	1	A. I see that, yes.
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29 expert witness, but I don't keep track of how much or how little. 21 QUESTIONS BY MR. TISI: 22 Q. Now in this case, in 2019, have you given any depositions we're now in April. Have you been identified as an expert or given any 25 been identified as an expert or given any 26 poinions in 2019 other than in this case? 2 A. I'd have to look back through 3 my records. I don't remember. 3 my records. I don't remember. 4 Q. You don't remember giving any depositions or signing any reports over the past three, four months? 4 A. Again, I'd have to look at my records. 5 Q. Okay. In this case we have 9 Q. Okay. In this case we have 9 Q. Okay. In this case we have 10 your records, which I'll mark in a minute. 11 Actually, I'll do it right now. Exhibit 12 Number 8, which are the records of 13 provided to us. 12 identification.) 16 QUESTIONS BY MR. TISI: 16 Q. And it shows that you have made in the Johnson & Johnson litigation about 18 \$150,000 so far this year? 19 Q. One is dated one is dated 23 March 1, 2019, and it's first date is 12 don't and it's first date is 12 don't remember and invoice. 24 December 3, 2018, through March 17th, and 25 through April 7, 2019; is that correct? through April 7, 2019; is that correct? through April 7, 2019; is that correct? MR. TISI: I'm sorry. I'm sorry. Page 85 Page 85 Page 85 Q. UESTIONS BY MR. TISI: Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of March 7, 2019? A. That's what the invoice shows, yes. Q. It shows just \$5 short of 30 \$29,000 as of Mar	18		18	
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	Page 86		Page 88
1	the support that they give me.	1	Q. Well, let me show you and
2	Q. And if you give me about five,	2	I'm taking this out of order a little bit.
3	ten minutes, I think we can finish this.	3	There's a website that I go to sometimes to
4	MR. TISI: Is that okay with	4	find this information out.
5	you, Counsel?	5	It identifies and I'm going
6	MS. MILLER: Sure.	6	to show you
7	MR. TISI: Okay.	7	MS. MILLER: We're up to what
8	QUESTIONS BY MR. TISI:	8	number exhibit?
9	Q. Your expert work you charge	9	MR. TISI: This is 47. It's
10	\$530 an hour, and \$720 an hour for your	10	taken out of order because everything
11	testimony?	11	is marked.
12	A. That's correct.	12	(Merlo Exhibit 47 marked for
13	Q. Okay. Those are those are	13	identification.)
14	numbers that are is there anything built	14	QUESTIONS BY MR. TISI:
15	into that number?	15	Q. It lists payments made by
16	We had Dr. Diette the other day	16	pharmaceutical companies to doctors, and I'm
17	where a certain portion of his bill went to	17	just curious as to whether this is accurate
18	somebody other than himself, so I'm asking	18	or not.
19	you that question.	19	Were you paid approximately
20	A. You know, and I'd have I	20	\$44,000 in 2016
21	don't actually know, but I'd have to look	21	MS. MILLER: Objection.
22	back or I'd have to talk the	22	QUESTIONS BY MR. TISI:
23	administrative services for that were	23	Q by
24	supported to me by VeraMedica may be built	24	MS. MILLER: Sorry, I thought
25	into that.	25	you were done.
	Page 87		Page 89
1	MS. MILLER: I would note that	1	QUESTIONS BY MR. TISI:
2	the it says 540 on the	2	Q by, among others, Novartis?
3	MR. TISI: Okay.	3	MS. MILLER: Objection.
4	MS. MILLER: on here and it	4	THE WITNESS: So I'm not really
5	says 530 on here, so	5	sure what this website is.
6	THE WITNESS: And again, I'm	6	I do I have been involved in
7	not sure of the specifics.	7	think tanks for involving other
8	QUESTIONS BY MR. TISI:	8	doctors and folks to talk about
9	Q. Okay. Now, in addition to	9	aspects of disease, and there have
10	consulting for litigation purposes like you	10	been honorariums involved with that.
11	are here, have you also worked directly for	11	I also give speeches to groups,
12	pharmaceutical companies over the past four,	12	mainly groups of doctors and nurses
13	five years?	13	and teams that take care of patients
14	A. I have not worked directly for	14	with cystic fibrosis. And those
15	pharmaceutical companies	15	speeches are sometimes sponsored by
16	Q. Well, I'm sorry.	16	pharmaceutical companies, so and
17	A over the past four or five	17	I'm provided an honorarium to give
18	years.	18	that.
ι 10	Q. That's a bad question.	19	So this doesn't surprise me.
19	Have you been marrided funding	20	QUESTIONS BY MR. TISI:
20	Have you been provided funding		0 01 0 11 1 1
20 21	by pharmaceuticals companies like Novartis,	21	Q. Okay. So and that's what
20 21 22	by pharmaceuticals companies like Novartis, for example?	22	I'm trying to get at here, Doctor.
20 21 22 23	by pharmaceuticals companies like Novartis, for example? A. So it depends. And that's a	22 23	I'm trying to get at here, Doctor. You can call them honorarium.
20 21 22	by pharmaceuticals companies like Novartis, for example?	22	I'm trying to get at here, Doctor.

Page 90 Page 92 1 pharmaceutical companies for outside -- work 1 a group that's taking care of patients with 2 outside of your official duties at Johns 2 advanced lung disease due to cystic fibrosis. 3 Hopkins. 3 And most times the talks are a And this goes from 2013 to 4 description about the disease, either to 4 5 5 2016, correct? educate the teams or describe how the process 6 б of when a kid grows up to be an adult with MR. LOCKE: Objection. THE WITNESS: And I am going to 7 cystic fibrosis, how do you take care of the 7 8 say that they're honorarium because 8 transition process. 9 that's what they're called. 9 Most of them don't involve a 10 QUESTIONS BY MR. TISI: 10 specific therapy for cystic fibrosis. 11 Oftentimes specific therapies are talked 11 Q. Okay. A. And I'm asked by sometimes 12 about after the talk with the group, but most 12 other centers to come, and that -- and 13 times it's done for education purposes. 13 Q. But most of the companies that 14 that -- to give a speech or a talk to the 14 15 group, and that talk or speech might be 15 pay these honorariums actually do produce 16 sponsored by a pharmaceutical industry, and 16 products used to treat cystic fibrosis and 17 that's what this reflects. 17 pulmonary disease, correct? A. Which companies are you 18 Q. Okay. And so without getting 18 19 down to the minutiae, this has 44,000, 19 referring to? approximately, in 2016, 31,000 in 2015, 20 20 Q. Gilead, Novartis. 21 79,000 in 2014, and 42,000, approximately, 21 A. Gilead, Novartis do have --2.2 more or less, in 2013. 22 well, Novartis not anymore, but --23 Is that about -- is that 23 Q. They did at the time? 24 accurate or in that ballpark? 24 -- Gilead and Novartis did have A. I mean, I'd have to look 25 25 products that were used to treat patients Page 91 Page 93 1 through my records, but that's what the 1 with cystic fibrosis. 2 website says. 2 Q. Okay. So just to wrap this up, 3 Q. Okay. And is that money that 3 and I -- we'll move on to the next topic and you get as an honorarium yours? 4 take our break. 4 5 5 A. It is mine, yes. MS. MILLER: Take our break. Q. And did you do it in 2017, 6 6 QUESTIONS BY MR. TISI: 7 7 2018, and continue into 2019? Q. You have done work in 8 8 litigation, which we've talked about earlier, MS. MILLER: Objection. Vague. 9 9 THE WITNESS: I'd have to look and you did speeches and talks for which you 10 through my records. I have done --10 received honorarium from pharmaceutical 11 companies. 11 I've given much less talks in the last 12 Do you also -- have you also 12 few years. provided consulting services to 13 13 QUESTIONS BY MR. TISI: 14 pharmaceutical companies or the like that are 14 Q. And on all the products that not giving speeches and all that? 15 15 you speak about or all the companies that A. I mean, I've helped design some 16 you -- they -- would it be fair to say that 16 they are all focused in the pulmonary area; 17 of these talks, put together the slides for 17 18 them, and I have been provided honorariums 18 in other words, either involved treatments 19 for that as well. 19 for pulmonary disease or descriptions of 20 MR. TISI: Let's take our pulmonary disease? Correct? 20 21 break. 21 So there's a lot to that 22 VIDEOGRAPHER: The time is 22 question because you mentioned products, you 23 mentioned descriptions, and I probably should 23 10:23 a.m., and we're going off the break it down a little bit. 24 record. 24 25 (Off the record at 10:23 a.m.) The talks are usually given to 25

		1	
	Page 94		Page 96
1	VIDEOGRAPHER: The time is	1	A. I don't know specifically. I
2	10:42 a.m., and we are back on the	2	don't know if advisors are assigned or
3	record.	3	advisors are recommended and then the student
4	QUESTIONS BY MR. TISI:	4	decides. I just don't know.
5	Q. Just a couple of questions real	5	Q. Have you ever had a student who
6	briefly before I move on to your report.	6	did a Capstone project with you that was not
7	You received your master's in	7	pulmonary in nature?
8	public health from Johns Hopkins School of	8	A. I've had students who have
9	Public Health in 2003?	9	worked with me that have been outside of
10	A. Yes, I believe so.	10	pulmonary and critical care medicine.
11	Q. And who was your advisor?	11	Q. Okay.
12	A. My advisor in the School of	12	A. Two have been surgeons who have
13	Public Health, or the School of Medicine at	13	worked on that we wound up working on many
14	that time?	14	projects together.
15	Q. School of Public Health.	15	Q. Okay. All right. So when was
16	A. I believe my advisor may have	16	the first time you met with who was your
17	been Marie Diener Smith, but I don't	17	primary contact for the ovarian cancer report
18	specifically recall.	18	that we've marked as Exhibit 3? Which of the
19	Q. Did you do a Capstone?	19	lawyers?
20	A. At the time the Capstone	20	Who first contacted you for
21	project was not part of the master's in	21	this project?
22	public health.	22	A. Ms. Miller.
23	Q. Okay. Did you have to do any	23	Q. Okay. And when was that done?
24	kind of final project to get your MPH?	24 25	When was the first contact you had with Ms. Miller?
25	A. We had a final project	25	IVIS. IVIIIIEI !
	Page 95		Page 97
1		1	
1	assignment with Biostatistics IV where we had to design a clinical study, do the analysis	1 2	A. 2018. Q. Okay. When?
2 3	to design a crimical study, do the analysis		
		2	
	and write up a manuscript, which was	3	A. Late 2018. I don't
4	and write up a manuscript, which was eventually published, but that was my final	3 4	A. Late 2018. I don't specifically recall.
4 5	and write up a manuscript, which was eventually published, but that was my final project.	3 4 5	A. Late 2018. I don't specifically recall. Q. The first billing record that
4 5 6	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study?	3 4 5 6	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I
4 5 6 7	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk	3 4 5 6 7	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date.
4 5 6 7 8	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic	3 4 5 6 7 8	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right?
4 5 6 7 8 9	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis.	3 4 5 6 7 8	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that.
4 5 6 7 8 9	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary	3 4 5 6 7 8 9	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the
4 5 6 7 8 9 10 11	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study?	3 4 5 6 7 8	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project?
4 5 6 7 8 9	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study.	3 4 5 6 7 8 9 10	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"?
4 5 6 7 8 9 10 11	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay.	3 4 5 6 7 8 9 10 11	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed,
4 5 6 7 8 9 10 11 12 13	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic	3 4 5 6 7 8 9 10 11 12 13	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you
4 5 6 7 8 9 10 11 12 13	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study.	3 4 5 6 7 8 9 10 11 12 13 14	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill?
4 5 6 7 8 9 10 11 12 13 14 15	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic	3 4 5 6 7 8 9 10 11 12 13 14 15	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill?
4 5 6 7 8 9 10 11 12 13 14 15	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for	3 4 5 6 7 8 9 10 11 12 13 14 15	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a
4 5 6 7 8 9 10 11 12 13 14 15 16 17	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health?	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health? A. I have been in the past. I'm	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean by "work."
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4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health? A. I have been in the past. I'm not this year. Q. Okay. How does the School of	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean by "work." Q. I can't go by anything any for more than what you billed.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health? A. I have been in the past. I'm not this year. Q. Okay. How does the School of Public Health assign students to advisors for	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean by "work." Q. I can't go by anything any for more than what you billed. How long between the first contact and the first work you did on the case that would start the process of
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health? A. I have been in the past. I'm not this year. Q. Okay. How does the School of Public Health assign students to advisors for their Capstone project?	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean by "work." Q. I can't go by anything any for more than what you billed. How long between the first contact and the first work you did on the case that would start the process of resulting in the report that was issued in
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	and write up a manuscript, which was eventually published, but that was my final project. Q. And was it a pulmonary study? A. It was a study looking at risk factors for resistant organisms in cystic fibrosis. Q. Okay. So it was a pulmonary cystic fibrosis study? A. It was a cystic fibrosis study. Q. Okay. A. An epidemiologic cystic fibrosis study. Q. Are you a Capstone advisor for any students in the School of Public Health? A. I have been in the past. I'm not this year. Q. Okay. How does the School of Public Health assign students to advisors for their Capstone project? I mean, do they look at	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. Late 2018. I don't specifically recall. Q. The first billing record that we had when we looked at that exhibit, I think Exhibit 8, had a December 2018 date. Is that about right? A. It would have been before that. Q. Okay. Was December 2018 the first actual work you did on the project? A. What do you mean by "work"? Q. It's the first time you billed, so why would that be the I mean, did you do work for which you did not bill? A. It just if you could be a little bit more specific about what you mean by "work." Q. I can't go by anything any for more than what you billed. How long between the first contact and the first work you did on the case that would start the process of

Page 98 Page 100 1 MS. MILLER: Objection. 1 me, right? 2 THE WITNESS: I don't 2 So you're being paid by the 3 specifically recall. 3 folks sitting next to you, and where it comes QUESTIONS BY MR. TISI: 4 from, we'll leave that -- we'll leave that to 4 Q. Okay. 5 other people to decide. 5 6 The question is: You are being 6 MS. MILLER: Don't forget to 7 7 paid to be here today? give me ten seconds before you answer. THE WITNESS: I'm sorry. 8 8 A. I will submit a bill, and I 9 QUESTIONS BY MR. TISI: 9 will be paid for being here today. 10 Q. Prior to -- now, we had 10 Q. Have you ever had any similar indicated that you did some litigation work. circumstances in cases involving Johnson & 11 11 12 You did some consulting work for which you 12 Johnson before? 13 received honoraria. 13 A. I don't believe that I have --14 14 Had you ever worked -- had you I don't believe so. 15 ever had -- done litigation work for 15 Q. Okay. Has Johnson & Johnson, 16 Johnson & Johnson previously? 16 putting litigation aside, ever hired you or A. Well, again, I'd have to 17 paid you honoraria to actually speak on a 17 18 clarify. I'm not doing litigation work for 18 topic? 19 19 Johnson & Johnson. A. I've never been paid an 20 Q. How would you -- so we don't 20 honorarium or have been hired by Johnson & 21 21 have to dance around that issue, how would Johnson. 22 22 Q. Okay. Have they ever consulted you --23 23 you in any way for any scientific reason But you keep asking it, so --A. 24 MR. LOCKE: Objection. 24 outside of litigation? A. Johnson & Johnson has not 25 25 Page 99 Page 101 1 consulted me outside of this litigation. 1 QUESTIONS BY MR. TISI: 2 2 Q. Well, okay. So you tell me --Q. Now, Merlo -- you know that 3 you tell me how I would phrase it so we don't 3 this report was filed in the context of have to keep going back and forth on that. 4 litigation, correct, Exhibit 3? It's got a 4 5 5 MS. MILLER: Objection. legal caption on it. QUESTIONS BY MR. TISI: 6 6 A. Exhibit 3, yes. Q. Okay. And it was requested as 7 7 Q. What makes you more 8 8 a result -- it was -- I'm sorry, it was comfortable? 9 Have you ever done consulting 9 generated as a result of a request from the 10 work for Johnson & Johnson in a litigation 10 lawyers for J&J? A. I was asked -- I'll just read 11 context before? 11 12 A. Again, the premise there is 12 this right here. I was asked to address that I'm doing something for someone, and I'm fundamental tenets of epidemiology, to review 13 13 14 not doing something for anyone. 14 epidemiology related to the potential 15 Q. Are you being paid by them? 15 association between perineal talc use and 16 A. I don't know who I'm being paid 16 ovarian cancer, to review plaintiffs' 17 epidemiologic expert reports, and to offer my 17 by. opinions on their methodologies. 18 Q. You don't know who -- you don't 18 know that the lawyers here are paying you for 19 Q. Who asked you to do that? 19 your time here today? 20 A. I was asked by Ms. Miller. 20 A. Again, I don't know who is Okay. And when you drafted --21 21 22 paying me. I know I'm getting paid, but I 22 when you did that, you understood that your 23 don't know who is paying me. 23 report was being submitted in the context of 24 Q. Okay. You're being paid in 24 this litigation, correct? this litigation. You're not being paid by 25 25 I understood that I would put

	Page 102		Page 104
1	together a report and that would likely be	1	THE WITNESS: Can you ask that
2	submitted.	2	again?
3	Q. In litigation?	3	QUESTIONS BY MR. TISI:
4	A. In litigation.	4	Q. Yes.
5	Q. Okay. So this report that you	5	Would you have done this report
6	have in front of you, Exhibit Number 6, was	6	had Ms. Miller not asked you to do it?
7	not generated in your normal course of your	7	A. I would not have specifically
8	professional work as a professor or excuse	8	put this together.
9	me, as an assistant professor at Johns	9	Q. Okay.
10	Hopkins, either in the School of Public	10	A. Had not been asked to provide
11	Health or the department of medicine?	11	my opinions on this topic.
12	MS. MILLER: Objection.	12	Q. Right.
13		13	
	THE WITNESS: Can you ask that		And before Ms. Miller reached
14	again?	14	out to you in December of 2018, some five
15	QUESTIONS BY MR. TISI:	15	months ago, you had never expressed an
16	Q. Yes.	16	opinion one way or another about the risk of
17	So the report that you have in	17	ovarian cancer associated with talcum powder
18	front of you, Exhibit Number 3, was	18	products, have you?
19	generated was not generated in the normal	19	MR. LOCKE: Objection.
20	course of your professional work as a	20	MS. MILLER: Objection.
21	professor or researcher at either the School	21	THE WITNESS: Can you ask that
22	of Medicine or the School of Public Health at	22	one more time?
23	Johns Hopkins?	23	QUESTIONS BY MR. TISI:
24	MS. MILLER: Objection.	24	Q. Yes.
25	THE WITNESS: So I'd say it	25	A. I'm sorry, I'm just getting
	Page 103		Page 105
1	damanda Dagayaa if yya laalt at it aa		
	depends. Because if we look at it as	1	when I hear objections, I just
2	a report in itself and how I approach	1 2	when I hear objections, I just Q. Yeah, they're intended to be
2		1	
	a report in itself and how I approach	2	Q. Yeah, they're intended to be that way.A. No, but it's so I need to
3	a report in itself and how I approach this subject, that would be very	2 3	Q. Yeah, they're intended to be that way.
3 4	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of	2 3 4	Q. Yeah, they're intended to be that way.A. No, but it's so I need to
3 4 5	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of things in my in my career. So	2 3 4 5	Q. Yeah, they're intended to be that way.A. No, but it's so I need to think about the question.
3 4 5 6	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of things in my in my career. So and in my professional duties within	2 3 4 5 6	Q. Yeah, they're intended to be that way. A. No, but it's so I need to think about the question. MS. MILLER: They're not
3 4 5 6 7	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of things in my in my career. So and in my professional duties within the School of Medicine and	2 3 4 5 6 7	Q. Yeah, they're intended to be that way. A. No, but it's so I need to think about the question. MS. MILLER: They're not intended to be that way. That was not
3 4 5 6 7 8	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of things in my in my career. So and in my professional duties within the School of Medicine and epidemiology.	2 3 4 5 6 7 8	Q. Yeah, they're intended to be that way. A. No, but it's so I need to think about the question. MS. MILLER: They're not intended to be that way. That was not a necessary comment.
3 4 5 6 7 8	a report in itself and how I approach this subject, that would be very similar to how I approach a lot of things in my in my career. So and in my professional duties within the School of Medicine and epidemiology. So is this any different? No. QUESTIONS BY MR. TISI:	2 3 4 5 6 7 8	Q. Yeah, they're intended to be that way. A. No, but it's so I need to think about the question. MS. MILLER: They're not intended to be that way. That was not a necessary comment. QUESTIONS BY MR. TISI:
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	Page 106	Page 108
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	review that you did in this case was as a result of being retained in this case? A. The literature review that I did in this case was because I was asked to provide an opinion on that. Q. Prior to Ms. Miller contacting you, had you ever read any of the articles that you read in connection with this report on talc and ovarian cancer? A. Likely no. Q. Okay. Now, you mentioned, if you go to page 1 of your report, the scope of your report as I count it, you have you did three things. You were asked to address fundamental tenets of epidemiology, correct? A. Address fundamental tenets of epidemiology. Q. Okay. Number 2, review the epidemiology of the potential association between perineal talc use and ovarian cancer, correct? A. To review the epidemiology related to the potential association between perineal talc use and ovarian cancer,	MS. MILLER: I think if you let him finish MR. TISI: I said I'm withdrawing the question. Okay? QUESTIONS BY MR. TISI: Q. I assume that you have reviewed fundamental tenets of epidemiology prior to December of 2018? MS. MILLER: Objection. THE WITNESS: I have reviewed and I teach fundamental tenets of epidemiology. QUESTIONS BY MR. TISI: Q. Okay. Putting that aside, prior to December of 2018, have you ever reviewed the epidemiology related to the potential exposure between perineal talc use and ovarian cancer? A. The potential exposure? Q. Association. A. I had not reviewed epidemiology related to the potential association between perineal talc and ovarian cancer. Q. Before December of 2018? A. Specifically, it may have been
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	correct. Q. And the third assignment was to review plaintiffs' epidemiology reports and offer your opinion on their methodologies? A. So those are two different things. To review plaintiffs' epidemiology expert reports and then to offer my opinions on their methodologies would be a separate thing. Q. Okay. All right. And to be clear, the scope the things that you did for this report as indicated on page 1, the four items we've talked about, are things you never did before December of 2019 {sic}? MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. 2018? MS. MILLER: Objection. THE WITNESS: Well, not necessarily. I think if we QUESTIONS BY MR. TISI: Q. Actually, let me rephrase the question. You have	November. I don't remember when we first talked, but Q. Let's say the last quarter. A late 2018. Q. Okay. So within the past eight or nine months? A. Before late 2018? No, I did had not reviewed the epidemiology Q. Okay. A related to the potential association between perineal talc exposure and ovarian cancer. Q. Okay. And if you go to page 46 and we touched on this. You said your opinion on Issue Number 2, which would be the results of your analysis of the epidemiology related to the potential association between perineal use and ovarian cancer, your opinion was: When analyzed in a methodologic manner, the body of medical literature simply does not support the conclusion that perineal talc exposure causes ovarian cancer. A. And we're referring to page 46 of

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Page 110 Page 112 1 O. Correct. 1 a group of epidemiology studies mean, true? 2 A. -- this report? 2 Can you say that again? 3 And which line was that? 3 Yeah. Oftentimes experts in 4 The last paragraph. 4 Q. 5 "When analyzed in a 5 epidemiology disagree about what an A. 6 epidemiology study actually means or a group methodologic manner, the body of medical 6 7 literature simply does not support the 7 of epidemiology studies actually means? A. There may be instances where 8 conclusion that perineal exposure to talc 8 causes ovarian cancer," yes. 9 9 epidemiologists may disagree on methodologies 10 (Merlo Exhibit 9 marked for 10 and how a study was performed. identification.) The interpretation of results 11 11 12 is usually something that is not disagreed 12 QUESTIONS BY MR. TISI: 13 O. And I have that conclusion 13 upon. It's usually the methodology that leads to the disagreement. 14 marked as Exhibit Number 9. Read it and tell 14 15 me if it's correct. 15 Q. Well, for an individual study, 16 A. That's correct. 16 the results are what the results are, true? A. For an individual study, the 17 And that's your professional 17 opinion on the issue of causation, correct? 18 results are usually what the results are 18 A. That is my professional and based on -- but those are -- with the caveat 19 19 epidemiologic opinion on causation. 20 20 that there are a lot of aspects that go into 21 21 O. Okay. those results: the study design, the study 22 A. Correct. 22 type, whether or not bias and confounding was 23 Q. Did you -- in addition to 23 accounted for before or after the analysis, 24 was the analysis appropriate. providing basic epidemiologic principles, did 24 25 you apply your professional and epidemiologic So those results can't just be 25 Page 111 Page 113 judgment to answer that question? 1 1 taken out of context without looking at all 2 A. I don't know what you mean by 2 the other aspects of the study. 3 "epidemiologic judgment." 3 Q. Okay. And when -- now, putting 4 Q. Well, this -- epidemiology 4 aside looking at the results of an individual 5 5 isn't the kind science where you just plug study, when you're looking at a body of 6 numbers in and you come out with an answer, 6 literature, all right, multiple epidemiology 7 7 studies, multiple biologic studies, and right? 8 8 MS. MILLER: Objection. trying to interpret a body of literature, do 9 9 THE WITNESS: Well, you use professional judgment? 10 epidemiology can be very objective and 10 MS. MILLER: Objection. 11 not subjective, and oftentimes there 11 THE WITNESS: Again, I don't --12 are numbers involved in epidemiology. I don't know what "professional 12 13 QUESTIONS BY MR. TISI: 13 judgment" means. I don't understand 14 Q. Clearly there are numbers --14 what you mean by that, so --15 clearly there are numbers involved. **QUESTIONS BY MR. TISI:** 15 But an expert in epidemiology 16 16 Q. Do you know if that's a phrase 17 also has to use their professional judgment 17 that's used in textbooks that are used at 18 interpreting the numbers, correct? 18 Johns Hopkins, that you teach students? 19 MS. MILLER: Objection. 19 MS. MILLER: Objection. THE WITNESS: I don't know what THE WITNESS: I mean, I have no 20 20 21 you mean by "interpreting the 21 idea. There's lots of textbooks. You 22 numbers." 22 would have to point me to one that 2.3 **OUESTIONS BY MR. TISI:** 23 you're referring to. **QUESTIONS BY MR. TISI:** 24 Q. Well, oftentimes experts 24 25 disagree about what an epidemiology study or 25 Q. We will do that.

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	Page 114		Page 116
1	Now, apart from your own	1	THE WITNESS: So in
2	causation opinion, which we've marked as	2	MS. MILLER: Ten seconds.
3	Exhibit Number 9, I think, right there is	3	THE WITNESS: So in general,
4	that number 9?	4	the hierarchy of evidence does put
5	A. That's number 9.	5	certain study designs above others.
6	Q. You also, as part of your	6	Meta-analyses are usually put above
7	assignment, offered opinions on the	7	randomized controlled trials.
8	plaintiffs' experts' reports, true?	8	Randomized controlled trials are
9	A. That's correct.	9	usually put above cohort studies.
10	Q. Okay. And in fact, if you go	10	Cohort studies are usually put above
11	to page 46 of your report, you devoted the	11	case-control studies. Case-control
12	vast majority of your conclusion paragraphs	12	studies are usually put above case
13	to discussing the methodologies that are used	13	series or cross-sectional studies.
14	by plaintiffs' experts in reaching their	14	But it depends. It depends on
15	conclusions.	15	many, many it depends on many, many
16	Do you see that?	16	factors, and you can't just take that
17	A. Yes.	17	in itself.
18	Q. Okay. For example, you say in	18	A poorly designed randomized
19	paragraph 2, "The methodologies used by	19	controlled trial may be much less
20	plaintiffs' experts ignore fundamental	20	informative than a very, very good
21	principles of epidemiology. In particular,	21	cohort study.
22	plaintiffs' experts ignore the hierarchy of	22	QUESTIONS BY MR. TISI:
23	evidence evaluating studies and rely on study	23	Q. Okay. Then you say a
24	designs that are inherently susceptible to	24	separate criticism. You say, "Plaintiffs'
25	bias. Specifically plaintiffs' experts pay	25	experts generally agree that even if the
	Page 115		Page 117
1			
	particular attention to criticizing cohort	1	studies do show an association between talc
2	particular attention to criticizing cohort studies, with little acknowledgement to the	1 2	studies do show an association between talc use and ovarian cancer, have found a relative
		1	
2 3 4	studies, with little acknowledgement to the	2	use and ovarian cancer, have found a relative
2 3 4 5	studies, with little acknowledgement to the limitations of case-control studies that find	2 3	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by
2 3 4 5 6	studies, with little acknowledgement to the limitations of case-control studies that find weak associations." Did I read that correctly? A. That's correct.	2 3 4	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by definition, is a weak association." Do you see that? A. I do, yes.
2 3 4 5 6 <mark>7</mark>	studies, with little acknowledgement to the limitations of case-control studies that find weak associations." Did I read that correctly? A. That's correct. Q. Okay. So you think that there	2 3 4 5	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by definition, is a weak association." Do you see that? A. I do, yes. Q. Okay. And you're critical of
2 3 4 5 6 <mark>7</mark> 8	studies, with little acknowledgement to the limitations of case-control studies that find weak associations." Did I read that correctly? A. That's correct.	2 3 4 5 6	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by definition, is a weak association." Do you see that? A. I do, yes.
2 3 4 5 6 <mark>7</mark> 8	studies, with little acknowledgement to the limitations of case-control studies that find weak associations." Did I read that correctly? A. That's correct. Q. Okay. So you think that there is a hierarchy of evidence that is generally accepted?	2 3 4 5 6 7	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by definition, is a weak association." Do you see that? A. I do, yes. Q. Okay. And you're critical of
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	studies, with little acknowledgement to the limitations of case-control studies that find weak associations." Did I read that correctly? A. That's correct. Q. Okay. So you think that there is a hierarchy of evidence that is generally accepted? MS. MILLER: Objection. THE WITNESS: It's not what I think. There is a general hierarchy of evidence QUESTIONS BY MR. TISI: Q. Okay. A in the epidemiologic community Q. Okay. A and so there are different levels of evidence based on a study design. Q. Okay. And on that under that design hierarchy, cohort studies are more reliable than case-control studies, as a general matter?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	use and ovarian cancer, have found a relative risk in the range of 1.2 to 1.6, this, by definition, is a weak association." Do you see that? A. I do, yes. Q. Okay. And you're critical of their description of the strength of the association? A. Relative risk in the range of 1.2 to 1.6 is, by definition, a weak association. Q. Whose definition? A. I think I have a reference in here. Q. Yeah, you have a reference to an Australian white paper. A. And in the epidemiology epidemiologic community, a relative risk or an odds ratio of less than 2 would be considered a weak association Q. Okay. A and very, very easy easily with the susceptibility to be
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30 (Pages 114 to 117)

	Page 118		Page 120
1	and that's why it's considered a weak	1	explain on the record my objections to
2	association.	2	this exhibit.
3	Q. The next thing you say is,	3	MR. TISI: Objection to form is
4	"Likewise, plaintiffs' experts demonstrate a	4	the question {sic}.
5	dose-response relationship in relying on	5	MS. MILLER: That's you
6	methodologically flawed studies and	6	can't object to the form of an
7	statistically insignificant trend lines."	7	exhibit.
8	A. That's correct.	8	MR. TISI: Fine. Objection.
9	Q. Okay. And then another thing	9	MS. MILLER: Excuse me. Please
10	is you say, "They see consistency where the	10	let me finish
11	studies are inherently inconsistent."	11	MR. TISI: Objection.
12	A. That's correct.	12	MS. MILLER: my sentence.
13	Q. Okay. So those are the four	13	You're being really rude to me.
14	main criticisms that you have?	14	MR. TISI: I'm being you
15	MS. MILLER: Objection.	15	know, honestly, you have been so
16	THE WITNESS: That's what it	16	unprofessional with every one of these
17	says here, yeah.	17	witnesses, and I have today pulled
18	(Merlo Exhibit 10 marked for	18	together all of your objections over
19	identification.)	19	the past couple of depositions, I've
20	QUESTIONS BY MR. TISI:	20	put them on a spreadsheet, and I will
21	Q. Okay. So I have pulled	21	send them to judge to Judge Pisano
22	together so it will help us frame our	22	and have him look at whether or not
23	discussion today, I pulled those four, put	23	your objections comply with the CMO.
24	them on a slide, and I'm going to ask you to	24	MS. SHARKO: Calm down.
25	look at it and tell me whether you agree that	25	MR. TISI: Okay. So if we're
			·
	Page 119		Page 121
1	those I'm sorry. Can I have that one	1	going to if we're going to go down
2	back? That's my copy.	2	this today as we did in the Shih
3	MS. MILLER: Yeah.	3	deposition, the Ballman deposition and
4	I'm going to object to this	4	every other deposition in this case,
5	exhibit. I think this pulls four	5	I'm going to pull them, I'm going to
6	sentences out of a 46-page report. It	6	send them to Judge Pisano, and we're
7	says "Merlo allegations," and Merlo's	7	going to have a hearing.
8	not making allegations. He's	8	MS. MILLER: I'm not going to
9	MR. TISI: Oh, he's making	9	be intimidated by your threats.
10	plenty of allegations, and your	10	MR. TISI: So let's just
11	expert	11	let's just comply with the CMO and say
12	MS. SHARKO: Don't interrupt.	12	"objection."
13	MS. MILLER: Excuse me.	13	MS. MILLER: This is an
14	MR. TISI: I'm going to tell	14	inappropriate exhibit.
15	you the Jessica, we're not going to	15	MR. TISI: Fine. Objection.
16	get into this. You've been	16	MR. LOCKE: I object as well.
17	MS. MILLER: I'm going to	17	QUESTIONS BY MR. TISI:
18	object to this exhibit	18	Q. Doctor, are those four
19	MR. TISI: So just say	19	criticisms
20	"objection."	20	MS. MILLER: Excuse me. Do you
21	MS. MILLER: and I'm going	21	have something to say?
	1 .	22	MR. LOCKE: Yeah, I object as
22	to explain no.	1	
22 23	MR. TISI: No. You're not	23	well for the same bases.
22 23 24	MR. TISI: No. You're not going to. Objection.	23 24	well for the same bases. MR. TISI: Okay.
22 23	MR. TISI: No. You're not	23	well for the same bases.

31 (Pages 118 to 121)

_	Page 122		Page 124
1	quote	1	MR. LOCKE: Objection.
2	MR. TISI: Tom	2	MS. MILLER: Objection.
3	MR. LOCKE: what's there.	3	THE WITNESS: I don't know what
4	MR. TISI: Tom, I'm asking	4	you mean by "serious charges."
5	him I haven't asked a question yet.	5	QUESTIONS BY MR. TISI:
6	MS. MILLER: It doesn't matter	6	Q. Well, you say that each of
7	whether you've asked the question.	7	plaintiffs' experts used Bradford Hill in a
8	We're objecting to the exhibit itself.	8	manner that was irregular and suggest
9	MR. TISI: Fine.	9	results-driven approach.
10	MS. MILLER: It's an	10	Do you remember that?
11	inappropriate exhibit.	11	MS. MILLER: Objection.
12	MR. TISI: So just say	12	THE WITNESS: Where are you
13	objection.	13	referring to?
14	MS. SHARKO: I don't think we	14	QUESTIONS BY MR. TISI:
15	have to do that. If you're concerned	15	Q. Well, go to page 40, if you
16	about the witness hearing what we're	16	could, of your report.
17	saying, he can leave the room.	17	On your report, you use the
18	MR. TISI: I'm happy to leave	18	phrase that "they jumped to causation without
19	the room	19	sufficiently determining association."
20	MS. SHARKO: This is totally	20	That's a word you use. That's
21	inappropriate, Mr. Tisi, and you know	21	the that's Section C.
22	it.	22	Do you see that?
23	MR. TISI: I can provide him	23	A. It says, "Jumping to causation
24	with a plate of spaghetti and ask him	24	without sufficiently determining
25	questions about it if I want to.	25	association."
	Page 123		Page 125
1	Okay? It's not inappropriate.	1	Q. Okay. So they jumped to
2	MR. LOCKE: And it would be a	2	causation.
3	complete waste of time.	3	Is that a word that you used or
4	QUESTIONS BY MR. TISI:	4	is it a yeard that was provided to you by
5	Q. Doctor, let me ask you: Are		is it a word that was provided to you by
1 -		5	defense lawyers in this case?
6	these four criticisms that are on that	6	defense lawyers in this case? MS. MILLER: Objection.
7	exhibit criticisms that you have of	6 7	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection.
7 8	exhibit criticisms that you have of plaintiffs' experts?	6 7 8	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't
7 8 9	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection.	6 7 8 9	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping
7 8 9 10	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection.	6 7 8 9 10	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently
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7 8 9 10 11 12	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of	6 7 8 9 10 11 12	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI:
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7 8 9 10 11 12 13 14 15 16	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI:	6 7 8 9 10 11 12 13 14 15 16 17	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your
7 8 9 10 11 12 13 14 15 16 17	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI: Q. Okay. So you disagree.	6 7 8 9 10 11 12 13 14 15 16 17	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your report, you say that they "ignored and
7 8 9 10 11 12 13 14 15 16 17 18	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI: Q. Okay. So you disagree. Is there anything that I would	6 7 8 9 10 11 12 13 14 15 16 17 18	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your report, you say that they "ignored and disregarded well-established hierarchy."
7 8 9 10 11 12 13 14 15 16 17 18 19 20	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI: Q. Okay. So you disagree. Is there anything that I would need to make those things to make them	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your report, you say that they "ignored and disregarded well-established hierarchy." A. Which page? I'm sorry.
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI: Q. Okay. So you disagree. Is there anything that I would need to make those things to make them accurate?	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your report, you say that they "ignored and disregarded well-established hierarchy." A. Which page? I'm sorry. Q. Page 35.
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7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	exhibit criticisms that you have of plaintiffs' experts? MS. MILLER: Objection. MR. LOCKE: Objection. MR. TISI: Can I have the spreadsheet that you made copies of today? Because I'm going to mark that as an exhibit. THE WITNESS: I didn't say these things. QUESTIONS BY MR. TISI: Q. Okay. So you disagree. Is there anything that I would need to make those things to make them accurate? A. It's all in my report.	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	defense lawyers in this case? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: Again, I didn't say "they." It just says, "C, jumping to causation without sufficiently determining association." QUESTIONS BY MR. TISI: Q. And then you describe what the plaintiffs' experts allegedly did, correct? A. It's all it's all in my report. Q. Okay. And on page 35 of your report, you say that they "ignored and disregarded well-established hierarchy." A. Which page? I'm sorry. Q. Page 35. And this is under the title of

	Page 126		Page 128
1	Q. Right there.	1	fabrication?
2	A. I know, but what I see that,	2	MS. MILLER: Objection.
3	Methodologic Flaws in Plaintiffs' Experts.	3	THE WITNESS: It says,
4	Q. Right.	4	"Plaintiffs' experts fabricate
5	And Section A is, "disregard	5	consistency by ignoring inconsistent
6	for the hierarchy of evidence."	6	studies."
7	A. Section A does say "disregard	7	QUESTIONS BY MR. TISI:
8	for the hierarchy of evidence."	8	Q. And that is a pretty serious
9	Q. And the third paragraph starts	9	thing to say about another scientist, is it
10	with, "A number of plaintiffs'	10	not?
11	epidemiologists ignore well-established	11	MS. MILLER: Objection.
12	hierarchy of evidence," correct?	12	THE WITNESS: Not if it's not
13	A. In my report it says, "A number	13	true.
14	of plaintiffs' epidemiologists ignore the	14	QUESTIONS BY MR. TISI:
15	well-established hierarchy of evidence."	15	Q. Okay. And so your opinion is
16	Q. And under the section that says	16	that these experts fabricated opinions?
17	Methodologic Flaws of Plaintiffs' Experts'	17	A. What this is saying is that
18	Epidemiology-Based Opinions, you also say	18	plaintiffs' expert fabricate consistency, not
19	that they "fabricated consistency by ignoring	19	fabricating an opinion; fabricate consistency
20	studies that did not support their	20	when consistency does not exist.
21	conclusion" on page 44, correct?	21	Q. Well, one of their opinions is
22	A. And where is that on page 44?	22	that there is consistency, correct?
23	Q. Well, Section 2 says,	23	MS. MILLER: Objection.
24	"Plaintiffs' experts fabricate consistency by	24	THE WITNESS: There is
25	ignoring inconsistent studies."	25	opinions well, you'd have to show
	Page 127		Page 129
1	A. It says Section 2, "Plaintiffs'	1	me who you're talking about and
2	experts fabricate consistency by ignoring	2	QUESTIONS BY MR. TISI:
3	inconsistent studies."	3	Q. Well, you wrote this, Doctor.
4	Q. That is a very to charge	1 4	
5	, ,	4	You wrote this, Doctor. You wrote this,
	another scientist with fabrication is a	5	Doctor. Okay?
6	another scientist with fabrication is a pretty serious charge, is it not?		Doctor. Okay? You said that "plaintiffs'
	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection.	5	Doctor. Okay?
6 7 8	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection. MS. MILLER: Objection.	5 6	Doctor. Okay? You said that "plaintiffs' experts fabricate consistency by ignoring inconsistent studies."
6 7	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection.	5 6 7	Doctor. Okay? You said that "plaintiffs' experts fabricate consistency by ignoring inconsistent studies." That was your words, correct?
6 7 8	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection. MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. It's not one that scientists	5 6 7 8	Doctor. Okay? You said that "plaintiffs' experts fabricate consistency by ignoring inconsistent studies."
6 7 8 9	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection. MS. MILLER: Objection. QUESTIONS BY MR. TISI:	5 6 7 8 9	Doctor. Okay? You said that "plaintiffs' experts fabricate consistency by ignoring inconsistent studies." That was your words, correct? A. That's correct. Q. All right. Now, my question to
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6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	another scientist with fabrication is a pretty serious charge, is it not? MR. LOCKE: Objection. MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. It's not one that scientists make lightly, is it? A. I'm not fabri I'm not I'm not charging anyone with anything. Q. Well, you're saying that that's what they did, correct? You're saying that "plaintiffs' experts fabricated consistency by ignoring inconsistent results." A. The studies were inconsistent. Q. Okay. A. So to say that they're consistent is	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Doctor. Okay? You said that "plaintiffs' experts fabricate consistency by ignoring inconsistent studies." That was your words, correct? A. That's correct. Q. All right. Now, my question to you is: You are you know that plaintiffs' experts, using your words here, said that the studies were consistent. A. We'd have to go through each expert and look Q. You've done that before today, right? A. But we'd have to do it today. Q. You've done that in preparation of this report? A. I've read all the reports.

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		<u> </u>	
	Page 130		Page 132
1	had you not actually done the work to make	1	medical evidence and the literature, there's
2	that conclusion, correct?	2	tremendous inconsistency between study
3	A. I have read the expert	3	designs, cohort studies and case controls,
4	Q. Okay.	4	and even within study designs.
5	A reports, but for the purpose	5	Q. Okay. And then
6	of today, we would have to	6	A. In looking at the difference
7	Q. I'm going to ask you that. I'm	7	between hospital-based case controls and
8	going to ask you that, Doctor.	8	population-based controls, there's
9	My question is: That's a	9	inconsistency.
10	pretty serious thing for one scientist to say	10	Q. Okay. And we're going to talk
11	about another.	11	about that. Okay. I promise you we're going
12	MS. MILLER: Objection.	12	to talk about that.
13	QUESTIONS BY MR. TISI:	13	But the question is: When you
14	Q. How would you how would you	14	use a word like "fabrication," you would
15	react if somebody said you that you	15	agree that that is a word that is has a
16	fabricated your opinion in this case?	16	particular understanding in science as being
17	MS. MILLER: Objection.	17	a very bad thing?
18	THE WITNESS: I didn't say that	18	MS. MILLER: Objection.
19	there's fabrication of opinion. I	19	THE WITNESS: I would neither
20	said that's fabricating consistency,	20	agree nor disagree with that. I don't
21	and that's a very different thing.	21	know even what you mean by "that's a
22	QUESTIONS BY MR. TISI:	22	very bad thing."
23	Q. Okay. And you don't think that	23	QUESTIONS BY MR. TISI:
24	the experts in this case testified that they	24	Q. So if somebody said to you,
25	thought the studies were consistent?	25	"Doctor, your report contains fabricated
			Page 133
_		_	
1	A. We'd have to look at each	1	conclusions or fabricated methodologies,"
2	expert and go through. It's a very general	2	would you not take that seriously?
3	question.	3	MS. MILLER: Objection.
4	Q. So you didn't do that before	4	THE WITNESS: I don't know what
5	today?	5	a fabricated conclusion is or a
6	MS. MILLER: Objection.	6	fabricated methodology, sir.
7	QUESTIONS BY MR. TISI:	7	QUESTIONS BY MR. TISI:
8	Q. You actually cite Moorman's	8	Q. You don't know what that is.
9	report, Siemiatycki's report, Singh's report,	9	But you used the word what
10	McTiernan's report. You cited all these	10	did you mean by "fabrication"? The word
11	all these here. And we can go through them,	11	"fabrication."
12	and I'm happy to go through them.	12	What does the word
13	But I'm asking you about your	13	"fabrication" mean to you?
14	report. And this report says that it is	14	A. What I mean is plaintiffs'
15	that it is your review they said it was	15	experts are making a case for consistency
16	consistent; you said that was fabricated.	16	when consistency does not exist.
17	Right?	17	Q. Okay. Well, you go on to say,
18	MS. MILLER: Objection.	18	Doctor, at the very last page, you say or
19	THE WITNESS: What I say is,	19	the paragraph says, "As a professor of
20	"plaintiffs' experts fabricate	20	medicine and public health, I have focused my
21	consistency by ignoring inconsistent	21	career using science of epidemiology as a
22	studies."	22	scientific tool to help improve the
23	QUESTIONS BY MR. TISI:	23	understanding of health and disease. The
	() ()Izov	24	distortion of epidemiologic science for
24	Q. Okay.	1	
24 25	A. And when we look at the body of	25	purposes of litigation does not achieve those

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goals; instead, it undermines scientific efforts to better understand the etiology of disease." Is it your opinion that	1 2 3	disease." Q. Right.
efforts to better understand the etiology of disease."	1	
disease."	1	
		A. "The distortion of
is it your odinion tilal	4	epidemiologic science for purposes of
plaintiffs' experts distorted the	5	litigation does not achieve this goal."
epidemiologic science for purposes of	6	Q. Okay.
litigation?	7	A. "Instead, it undermines
	8	scientific efforts to better understand the
		etiology of disease."
	1	Q. We read that. Now I'm asking
	11	you a question about that.
		My question is: Is it your
•	1	opinion that that's what the plaintiffs'
	1	experts did in this case?
		MS. MILLER: Objection.
		THE WITNESS: I don't know what
		the experts did in this case as far as
		with regards to that.
		What I can say is that the
		distortion of epidemiologic science
1 1	1	for purposes of litigation does not
	1	achieve those goals.
		QUESTIONS BY MR. TISI:
•	1	Q. Okay. I'm asking you this
		question. You have to answer this question.
Q. This you're claiming that's what		question. Tou have to answer and question.
Page 135		Page 137
defendants that that's what plaintiffs'	1	Okay?
experts did in this case.	2	Is it your opinion, to a
A. Can you say that again?	3	reasonable degree of medical and scientific
Q. Yes.	4	certainty, that plaintiffs' experts distorted
You say you don't do that,	5	the epidemiologic science for the purposes of
right?	6	litigation?
You don't distort the	7	MR. LOCKE: Objection.
scientific evidence for the purposes of	8	THE WITNESS: So I believe I
litigation, right?	9	answered that already.
MS. MILLER: Objection.	10	I the methodology that was
THE WITNESS: Can you ask that	11	performed by plaintiffs' experts is
question	12	flawed, and, therefore, my opinions in
QUESTIONS BY MR. TISI:	13	relation to the potential causal
Q. Yes.	14	association between talcum powder and
A just a little slower?	15	ovarian cancer when I think of
You're speaking very fast.	16	when I based on the body of medical
Q. You say that you say, as a	17	evidence, there is no causal
professor of medicine in public health, it's	18	association between perineal talc
a bad thing to distort the epidemiologic	19	usage and ovarian cancer.
evidence for litigation, true?	20	And the critique I have against
	21	plaintiffs' opinions relate to their
of medicine in public health, I have focused	22	methodology.
	1	
my career on using the science of	23	QUESTIONS BY MR. TISI:
my career on using the science of epidemiology as a scientific tool to help	23	QUESTIONS BY MR. TISI: Q. Right.
	defendants that that's what plaintiffs' experts did in this case. A. Can you say that again? Q. Yes. You say you don't do that, right? You don't distort the scientific evidence for the purposes of litigation, right? MS. MILLER: Objection. THE WITNESS: Can you ask that question QUESTIONS BY MR. TISI: Q. Yes. A just a little slower? You're speaking very fast. Q. You say that you say, as a professor of medicine in public health, it's a bad thing to distort the epidemiologic evidence for litigation, true? A. What I say is, "As a professor	THE WITNESS: That's what I wrote in my report. QUESTIONS BY MR. TISI: Q. Did you mean to refer to plaintiffs' experts here? A. In any epidemiologic study Q. I'm asking you this question. MS. MILLER: Please let him answer. THE WITNESS: In any epidemiologic study, if science is distorted for the purpose of litigation, it goes against Q. Right. A what I've done in my Q. And you're claiming that's what Page 135 defendants that that's what plaintiffs' experts did in this case. A. Can you say that again? Q. Yes. You say you don't do that, right? You don't distort the scientific evidence for the purposes of litigation, right? MS. MILLER: Objection. THE WITNESS: Can you ask that question QUESTIONS BY MR. TISI: Q. Yes. A just a little slower? You're speaking very fast. Q. You say that you say, as a professor of medicine in public health, it's a bad thing to distort the epidemiologic evidence for litigation, true? A. What I say is, "As a professor

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	Page 138		Page 140
1	understand you have a difference of opinion	1	QUESTIONS BY MR. TISI:
2	on their methodology. But you take it one	2	Q. So you have no idea what the
3	step further, right?	3	motive and intent of plaintiffs' experts were
4	You say it was their	4	in drafting their opinions, right?
5	methodology at least the implication is,	5	A. I have no idea.
6	and I'm asking you the question: Are you	6	Q. Okay. Are you saying that the
7	suggesting that they fabricated in a	7	methodology that they used was fraudulent?
8	methodology for the purposes of litigation?	8	MS. MILLER: Objection.
9	MR. LOCKE: Objection.	9	THE WITNESS: I don't think
10	MS. MILLER: Objection. Asked,	10	that there's are you referring to
11	answered, mischaracterizes his	11	any part of my report that says
12	opinions and his testimony.	12	fraudulent?
13	THE WITNESS: I believe I	13	QUESTIONS BY MR. TISI:
14	answered that.	14	Q. I'm asking you your opinion
15	QUESTIONS BY MR. TISI:	15	I'm asking your opinion right now, under
16	Q. Okay. I want to hear about	16	oath.
17	your litigation I want to hear about what	17	Are you saying that the
18	your opinion is as the motivation for doing	18	opinions that they offered was fraudulent?
19	what they did.	19	MS. MILLER: Objection.
20	Is it your opinion that their	20	QUESTIONS BY MR. TISI:
21	motive in drafting their reports and using	21	Q. The methodology they used was
22	the methodology that they use was to assist	22	fraudulent?
23	in litigation?	23	A. Probably have to be a little
24	MS. MILLER: Objection.	24	bit more specific.
25	THE WITNESS: I have no idea	25	Q. Tell me what your views are on
23	THE WITNESS. Thave no idea		Q. Ten me what your views are on
	Page 139		Page 141
1	Page 139 what their motivation was.	1	Page 141 that.
1 2		1 2	that. A. Which expert are we talking
	what their motivation was.		that.
2	what their motivation was. QUESTIONS BY MR. TISI:	2	that. A. Which expert are we talking
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	Page 142		Page 144
1	science.	1	shaking
2	Q. Okay. Do you think that	2	MR. TISI: Okay. That's fine.
3	Dr. McTiernan did?	3	MS. SHARKO: and I ask that
4	MS. MILLER: Objection.	4	you calm down.
5	THE WITNESS: Can you ask that	5	MR. TISI: I think it's I
6	one more time?	6	think you can ask if I'd calm down,
7	QUESTIONS BY MR. TISI:	7	but when this gentleman comes in here
8	Q. Yes.	8	and says our experts fabricated,
9	Do you think that Dr. McTiernan	9	ignored, I take it personally.
10	distorted epidemiologic science?	10	QUESTIONS BY MR. TISI:
11	MS. MILLER: Objection.	11	Q. I want to hear I want to
12	THE WITNESS: I have no idea.	12	ask I want to ask you this question,
13	QUESTIONS BY MR. TISI:	13	Doctor.
14	Q. Okay. Do you think that	14	MS. SHARKO: Well, I think
15	Dr. Smith-Bindman distorted science?	15	you're misrepresenting his report, and
16	MS. MILLER: Objection.	16	he's told that you.
17	THE WITNESS: I don't know.	17	MR. TISI: Well, if you are,
18	QUESTIONS BY MR. TISI:	18	then maybe maybe he ought to back
19	Q. Do you think that Dr. Singh	19	down on some of the adjectives he
20	distorted science?	20	uses.
21	A. The same answer stands.	21	QUESTIONS BY MR. TISI:
22	Q. Dr. Moorman, do you think she	22	Q. Doctor, do you believe
23	distorted science?	23	MS. SHARKO: Do you need a
24	MS. MILLER: Objection.	24	break, Mr. Tisi?
25	THE WITNESS: I think I	25	MR. TISI: No, I don't, Susan,
	1112 ((111.)2001 1 1111111 1		11211 11011 110, 1 4011 1, 2 40411,
	Page 143		Page 145
1	can't I can't speak to the	1	but maybe you do.
2	motivations of someone else.		
	mon various of someone eise.	2	QUESTIONS BY MR. TISI:
3	QUESTIONS BY MR. TISI:	3	QUESTIONS BY MR. TISI: Q. Let me ask you this question,
3	QUESTIONS BY MR. TISI:	3	Q. Let me ask you this question,
3 4	QUESTIONS BY MR. TISI: Q. Do you believe that the same	3 4	Q. Let me ask you this question, Doctor. Do you believe that the same standards that you apply to reviewing
3 4 5	QUESTIONS BY MR. TISI: Q. Do you believe that the same standards you would apply to plaintiffs' experts should apply to your opinions: You shouldn't fabricate; you shouldn't distort;	3 4 5	Q. Let me ask you this question, Doctor. Do you believe that the same standards that you apply to reviewing plaintiffs' experts in this report should
3 4 5 6	QUESTIONS BY MR. TISI: Q. Do you believe that the same standards you would apply to plaintiffs' experts should apply to your opinions: You	3 4 5 6	Q. Let me ask you this question, Doctor. Do you believe that the same standards that you apply to reviewing
3 4 5 6 7	QUESTIONS BY MR. TISI: Q. Do you believe that the same standards you would apply to plaintiffs' experts should apply to your opinions: You shouldn't fabricate; you shouldn't distort;	3 4 5 6 7 8	Q. Let me ask you this question, Doctor. Do you believe that the same standards that you apply to reviewing plaintiffs' experts in this report should apply to your report as well? MS. MILLER: Objection.
3 4 5 6 7 8	QUESTIONS BY MR. TISI: Q. Do you believe that the same standards you would apply to plaintiffs' experts should apply to your opinions: You shouldn't fabricate; you shouldn't distort; you shouldn't ignore? MS. MILLER: Objection. That's	3 4 5 6 7 8	Q. Let me ask you this question, Doctor. Do you believe that the same standards that you apply to reviewing plaintiffs' experts in this report should apply to your report as well? MS. MILLER: Objection. THE WITNESS: I believe that my
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1	Page 146		Page 148
	QUESTIONS BY MR. TISI:	1	A. I don't know what that means.
2	Q. If you ignored evidence of	2	Q. Okay. Do you think you should
3	consistency, if you ignored evidence of dose	3	not fabricate a methodology for the purposes
4	response, you would be subject to the same	4	of litigation?
5	criticism. You would hold yourself up to no	5	MS. MILLER: Objection.
6	different scrutiny than you would imply	6	THE WITNESS: I never said
7	you would impose on plaintiffs' experts,	7	fabricating methodology.
8	agreed?	8	QUESTIONS BY MR. TISI:
9	MS. MILLER: Objection. There	9	Q. Okay. Do you think that you
10	was a question, and before he could	10	should not you should not ignore evidence
11	answer it, you asked another question.	11	and well-established principles?
12	MR. LOCKE: Objection.	12	MS. MILLER: Objection.
13	QUESTIONS BY MR. TISI:	13	THE WITNESS: Can you ask that
14	Q. Would you agree that you should	14	one more time?
15	not fabricate inconsistency when there is	15	MR. TISI: Yeah.
16	consistency?	16	THE WITNESS: I'm not sure I
17	MS. MILLER: Objection.	17	understood what that
18	THE WITNESS: If we just go	18	QUESTIONS BY MR. TISI:
19	back to the medical evidence in this	19	Q. Do you think you should not
20	specific case, the fact that there is	20	ignore evidence?
21	no strength of association or	21	Should you ignore evidence?
22	QUESTIONS BY MR. TISI:	22	MS. MILLER: Objection.
23	Q. I'm not asking you that	23	THE WITNESS: I mean, in
24	question. Doctor, I'm going to move to	24	looking at the causal association
25	strike it. And honestly, we're going to	25	between exposure and outcome, we try
	<i>,, e e</i>		
	Page 147		Page 149
1	need we may need to take a break on this	1	to look at all the evidence.
2	because you need to listen to my question.	2	QUESTIONS BY MR. TISI:
3	My question is: Would you hold	3	O D 1 C 1C 10
	yourself to the same standards that you have		Q. Do you know Sonal Singh?
4	yourself to the same standards that you have	4	Q. Do you know Sonal Singn?A. No.
4 5	criticized the plaintiffs' experts for?	4 5	
			A. No.
5	criticized the plaintiffs' experts for?	5	A. No.Q. He previously worked at
5 6	criticized the plaintiffs' experts for? I'm not asking about the	5 6	A. No. Q. He previously worked at Hopkins.
5 6 7	criticized the plaintiffs' experts for? I'm not asking about the evidence in this case.	5 6 7	A. No. Q. He previously worked at Hopkins. Did he distort science?
5 6 7 8	criticized the plaintiffs' experts for? I'm not asking about the evidence in this case. Scientifically, would you agree	5 6 7 8	A. No. Q. He previously worked at Hopkins. Did he distort science? MS. MILLER: Objection.
5 6 7 8 9	criticized the plaintiffs' experts for? I'm not asking about the evidence in this case. Scientifically, would you agree that you should not you should not ignore	5 6 7 8 9	A. No. Q. He previously worked at Hopkins. Did he distort science? MS. MILLER: Objection. THE WITNESS: I have no idea.
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	Page 150		Page 152
1	THE WITNESS: Somewhere around	1	
2	there. I don't remember the specific	2	A. There are hospital-based case-control studies. There are
3	time.	3	population-based case-control studies, pool
4	MS. MILLER: Please let me	4	case-control studies, cohort studies.
5	finish my objections.	5	Q. They go from the 1980s, 1990s,
6	QUESTIONS BY MR. TISI:	6	2000s and 2010s. Four decades, correct?
7	Q. Prior to being contacted by the	7	A. Spanning 1982 through 2016 for
8	lawyers	8	these studies that we're talking about right
9	MS. SHARKO: I assume you mean	9	here.
10	December 2018.	10	Q. Were you involved in any of
11	MR. TISI: 2018.	11	these studies in any way even peripherally?
12	QUESTIONS BY MR. TISI:	12	A. I was not.
13		13	
14		14	Q. Okay. Had anybody in this period of time ever contacted you and said,
15	lawyers representing Johnson & Johnson to	15	* · · · · · · · · · · · · · · · · · · ·
16	defend them in lawsuits, you had never	16	"You know, we have this issue out there about
17	expressed the causation opinions, any of the information in Exhibit Number 3, correct,	17	whether or not talcum powder products are associated with ovarian cancer; could you
		18	
18	other than the general principles of epidemiology? Any let me rephrase the	19	consult with us on that question?"
19	1 2, 1	20	MS. MILLER: Objection.
20 21	question.	21	THE WITNESS: What period of time are we talking about?
	Prior to December of 2018, you	22	
22	had never expressed opinions about talc and		QUESTIONS BY MR. TISI:
23	ovarian cancer, true?	23 24	Q. 1982 till today.
24 25	A. That's about right.	25	Other than the lawyers.
45	Q. Okay. And you do know that the	25	A. Can you ask me that question
	Page 151		Page 153
1	Page 151 epidemiologic the first epidemiologic	1	Page 153 again then?
1 2		1 2	
	epidemiologic the first epidemiologic		again then?
2	epidemiologic the first epidemiologic study was published by researchers at Harvard	2	again then? Q. Yeah.
2 3	epidemiologic the first epidemiologic study was published by researchers at Harvard University in 1982, correct?	2 3	again then? Q. Yeah. From 1982 until today, has
2 3 4	epidemiologic the first epidemiologic study was published by researchers at Harvard University in 1982, correct? MS. MILLER: Objection.	2 3 4	again then? Q. Yeah. From 1982 until today, has anybody, other than the lawyers for Johnson &
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2 3 4 5 6 7	epidemiologic the first epidemiologic study was published by researchers at Harvard University in 1982, correct? MS. MILLER: Objection. THE WITNESS: I would have to look back through the through my report and see where those researchers	2 3 4 5 6 7	again then? Q. Yeah. From 1982 until today, has anybody, other than the lawyers for Johnson & Johnson, ever asked you your opinions about ovarian cancer and talcum powder products? MS. MILLER: Objection.
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24 QUESTIONS BY MR. TISI: 24 kinds of drugs, right?	7 8 9 10 11 12 13 14 15 16 17 18 19 20	public forum, correct? MS. MILLER: Objection. THE WITNESS: Again, I have no idea. QUESTIONS BY MR. TISI: Q. Do you know that did Johnson & Johnson ever ask you, "You know, Dr. Merlo, we need somebody to present our point of view on what the science says. Would you go testify before Congress?" Did they tell you that? MS. MILLER: Objection. THE WITNESS: Did they tell me what?	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	I've answered this before, but I would have been having reviewed the literature, I would be really excited to do that. QUESTIONS BY MR. TISI: Q. Uh-huh. Let me ask you this, Doctor maybe Ms. Sharko will ask you to do it after this deposition. We'll find out. Has Johnson & Johnson ever come to you and asked you, we have to do a causation analysis on any issue, on any product it markets? A. They have not. Q. And you know Johnson & Johnson's a big company. They produce
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Page 158 Page 160 1 THE WITNESS: I have no idea. 1 done on this issue, have you ever either been 2 I mean, I know of Johnson & Johnson, 2 approached or approached Johnson & Johnson 3 but I don't have an opinion on what 3 and said, "You know something, I'm an expert 4 4 they do or have really any knowledge in design of studies. Let me help you design 5 5 a study that would -- that would answer this on what they do. б question once and for all"? 6 **OUESTIONS BY MR. TISI:** 7 7 MS. MILLER: Objection. Q. And other than the litigation, 8 they never came to you to ask your advice on 8 **QUESTIONS BY MR. TISI:** 9 anything, true? 9 Q. Has that ever happened? 10 10 MS. MILLER: Objection. MS. MILLER: Objection. 11 THE WITNESS: I think we've 11 THE WITNESS: Excuse me. That 12 talked about that. They didn't ask me 12 has not happened. 13 to do anything. 13 **QUESTIONS BY MR. TISI:** 14 QUESTIONS BY MR. TISI: 14 Q. Okay. 15 Q. Now, in this case, literally 15 A. However, I would gladly like to 16 millions of documents have been produced --16 be involved in something like that. 17 millions of pages of documents have been 17 Q. Okay. produced to us. A. I think the key issue here in 18 18 designing a clinical study like that is there 19 Would it surprise you that the 19 20 name Christian Merlo doesn't appear in any of 20 are a lot of difficulties. 21 21 O. Well, you can't do a clinical 22 MS. MILLER: Objection. 22 trial on this issue, can you? THE WITNESS: I don't know what A. Well, it depends what you mean 23 23 24 24 by a clinical trial, because clinical trials you're referring to. 25 25 can be cohort studies; they can be Page 159 Page 161 1 **QUESTIONS BY MR. TISI:** 1 case-control studies. 2 Q. Millions of pages of documents 2 Understood. 3 relating to research and marketing and 3 You cannot randomize patients 4 evidence and -- about ovarian cancer and its 4 to receiving talcum powder products, and it 5 5 relationship to talcum powder products, the would be unethical and unfeasible to study 6 6 this question using a randomized, controlled, composition of talcum powder, all kinds of 7 placebo-controlled trial? 7 issues, have been produced to us in this 8 8 A. It would be very difficult to 9 9 Would it surprise you that your perform a randomized controlled trial. 10 name doesn't appear even once over the past 10 Q. It would also be -- it would 11 not only be difficult, it would be unethical 11 40 or 50 years of documents that we've 12 12 received? if the hypothesis was to assess whether or 13 not talcum powder products cause ovarian 13 MR. LOCKE: Objection. THE WITNESS: No, it wouldn't 14 14 cancer? 15 15 surprise me, but my opinion on this A. Usually when randomized 16 and the potential association --16 controlled trials are designed, by 17 potential causal association between 17 definition, if there is a -- if you're talcum powder and ovarian cancer is 18 testing a hypothesis that something is 18 19 causing something, usually you wouldn't 19 based on the medical literature. 20 perform a randomized controlled trial. 20 QUESTIONS BY MR. TISI: 21 O. It would be unethical. There 21 Q. Okay. Have the scientists at 22 are rules against that, correct? 22 Johnson & Johnson ever reached out to you and 23 MS. MILLER: Objection. 23 said -- even as of today, even as of the day THE WITNESS: There are rules you wrote this report criticizing the various 24 24 studies that have been done in this case, 25 against randomized controlled trials 25

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	Page 162		Page 164
1	when the hypothesis is that you're	1	provide us with potential evidence when
2	going to cause there is the	2	looking at the association between exposure
3	potential to cause harm.	3	and outcome.
4	QUESTIONS BY MR. TISI:	4	Q. Okay. Has the FDA ever reached
5	Q. Right.	5	out to you and asked your opinions on the
6	So it's not it's not you	6	question of whether or not talc causes
7	would not expect to see clinical trials in a	7	ovarian cancer?
8	setting like this?	8	A. The FDA has not.
9	A. Again, these are there are	9	Q. Okay. You know IARC?
10	clinical trials that have been done, but we	10	A. I know what IARC stands for,
11	wouldn't expect to see a randomized	11	but I don't know IARC.
12	controlled trial performed here.	12	Q. Okay. Do you have you
13	Q. Okay. And you would agree with	13	has the International Agency for Research on
14	me that in circumstances like this, what	14	Cancer, IARC, ever contacted you for any
15	typically experts have are epidemiology	15	reason to ask you to be involved in any
16	studies, observational studies.	16	assessment of any exposure and cancer?
17	MS. MILLER: Can you just ask	17	A. They have not.
18	that again?	18	Q. Have you written Health Canada
19	QUESTIONS BY MR. TISI:	19	to express your opinions that you've given in
20	Q. You want me to answer {sic}	20	your report?
21	again?	21	MS. MILLER: Objection.
22	A. If you could ask me again, yes,	22	THE WITNESS: Again, I don't
23	please.	23	really know who Health Canada is.
24	Q. Do you where the question is	24	QUESTIONS BY MR. TISI:
25	whether or not an environmental factor or a	25	Q. Have you been provided with
	Page 163		Page 165
1		1	
1 2	substance causes harm, what science typically relies on are observational studies and	1 2	Page 165 Health Canada's draft report on talcum powder and ovarian cancer?
	substance causes harm, what science typically		Health Canada's draft report on talcum powder
2	substance causes harm, what science typically relies on are observational studies and	2	Health Canada's draft report on talcum powder and ovarian cancer?
2 3	substance causes harm, what science typically relies on are observational studies and biologic studies because you can't do	2 3	Health Canada's draft report on talcum powder and ovarian cancer? MS. MILLER: Objection. I don't know what that means.
2 3 4	substance causes harm, what science typically relies on are observational studies and biologic studies because you can't do controlled trials?	2 3 4	Health Canada's draft report on talcum powder and ovarian cancer? MS. MILLER: Objection. I
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2 3 4 5 6	substance causes harm, what science typically relies on are observational studies and biologic studies because you can't do controlled trials? MS. MILLER: Objection. THE WITNESS: Okay. Again, we	2 3 4 5 6	Health Canada's draft report on talcum powder and ovarian cancer? MS. MILLER: Objection. I don't know what that means. MR. TISI: You don't have to, Counsel. THE WITNESS: Is there
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	Page 166		Page 168
1	saw it Counsel, you know, honestly,	1	THE WITNESS: Can you ask that
2	you really need to stop. You are	2	one more time?
3	among the most unprofessional people I	3	QUESTIONS BY MR. TISI:
4	have ever seen objecting in a case.	4	Q. Yeah.
5	You inject yourself into almost every	5	Is it of interest to you what
6	· · ·	6	
	question.	7	other scientists and regulators have said
7	MR. LOCKE: Objection.		about the question you were asked to address
8	MS. SHARKO: Your ad hominem	8	outside of litigation?
9	and personal attacks	9	A. I'm curious about what others
10	MR. TISI: Counsel, I was	10	say; however, in my review of the body of
11	called at the last deposition	11	medical literature that is out there today in
12	MS. SHARKO: and venomous	12	the published, peer-review literature, my
13	comments, Mr. Tisi, are inappropriate.	13	opinions are based on that.
14	MR. TISI: I was called	14	Q. Okay.
15	MS. SHARKO: Stop it	15	A. I'm curious about other things,
16	immediately.	16	but my opinions are based on what is peer
17	MR. TISI: I was called at the	17	reviewed and published.
18	last deposition I was kicking her	18	Q. Have you looked to see what
19	under the table. I was called that I	19	others have said about the body of evidence?
20	speak to her as a you know, that I	20	A. I don't know what you mean by
21	speak to women this way.	21	"others."
22	Please don't talk to me about	22	Q. Other scientists? Other
23	ad hominem attacks.	23	regulatory bodies?
24	MS. SHARKO: Well, those other	24	A. You'd have to be more specific.
25	things you said are true. You were	25	Q. Example, Health Canada?
	Page 167		Page 169
1	kicking her.	1	A. Health Canada? And again, I
2	MR. TISI: Oh, okay. I was not	2	have no idea who Health Canada is, whether or
3	kicking her under the table, and you	3	not who is involved in Health Canada,
4	know that that's true not true.		,
_	know that that's true - not true.	4	whether or not there are scientists involved,
5	MR. LOCKE: The witness is	4 5	
5 6			whether or not there are scientists involved,
	MR. LOCKE: The witness is	5	whether or not there are scientists involved, whether or not who's there. I have no idea.
6	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a	5 6	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review
6 7	MR. LOCKE: The witness is entitled to read	5 6 7	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report?
6 7 8	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm	5 6 7 8	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence
6 7 8 9	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm asking whether he ever saw the	5 6 7 8 9	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence through 2006. Did you look at that?
6 7 8 9 10	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm asking whether he ever saw the document.	5 6 7 8 9 10	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence through 2006. Did you look at that? A. Can you say that again? You
6 7 8 9 10 11	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm asking whether he ever saw the document. MS. MILLER: He needs to review it to know if he ever saw it.	5 6 7 8 9 10 11	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence through 2006. Did you look at that? A. Can you say that again? You said two dates.
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6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm asking whether he ever saw the document. MS. MILLER: He needs to review it to know if he ever saw it. MR. TISI: No. I'm asking him the questions. MS. MILLER: Okay. THE WITNESS: I'm looking to see if I've seen this before. I don't know. QUESTIONS BY MR. TISI: Q. Okay. Is it of interest to you how other people outside of litigation, other scientists, have evaluated the question of whether or not talcum powder products cause ovarian cancer?	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence through 2006. Did you look at that? A. Can you say that again? You said two dates. Q. Yes. There was a 2010 report looking at evidence up to 2006. Did you look at that report? A. I believe I did review that. Q. And did you look any other place to see what other scientists and doctors have said about the issue? A. Again, my job is not to have opinions about other doctors or scientists. My job is to give an opinion based on the body of medical evidence, and that's what I
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. LOCKE: The witness is entitled to read MR. TISI: I'm not asking him a question about the document. I'm asking whether he ever saw the document. MS. MILLER: He needs to review it to know if he ever saw it. MR. TISI: No. I'm asking him the questions. MS. MILLER: Okay. THE WITNESS: I'm looking to see if I've seen this before. I don't know. QUESTIONS BY MR. TISI: Q. Okay. Is it of interest to you how other people outside of litigation, other scientists, have evaluated the question of whether or not talcum powder products cause	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	whether or not there are scientists involved, whether or not who's there. I have no idea. Q. How about IARC? Did you review the IARC 2010 report? You were reviewing evidence through 2006. Did you look at that? A. Can you say that again? You said two dates. Q. Yes. There was a 2010 report looking at evidence up to 2006. Did you look at that report? A. I believe I did review that. Q. And did you look any other place to see what other scientists and doctors have said about the issue? A. Again, my job is not to have opinions about other doctors or scientists. My job is to give an opinion based on the

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	Page 170		Page 172
1	Q. Did you seek epidemio input	1	report.
2	from your epidemiologic colleagues at Johns	2	A. I see it there on page 30.
3	Hopkins?	3	Q. Yeah. So now can we agree it's
4	A. I seek I seek help from	4	a seminal article?
5	epidemiologists all the time.	5	MS. MILLER: Objection.
6	Q. For this report?	6	THE WITNESS: Well, it says,
7	A. No.	7	"As Hill noted his seminal article."
8	Q. Okay. Did you speak to	8	QUESTIONS BY MR. TISI:
9	Dr. Diette about your opinions in this case?	9	Q. So why was that such a hard
10	A. No.	10	question to ask when answer when I asked
11	Q. Did you speak to Dr. Szklo? Is	11	you what your opinion was?
12	that his name?	12	MR. LOCKE: Objection.
13	A. Yeah. No.	13	MS. MILLER: Objection.
14	Q. Did you speak to him?	14	QUESTIONS BY MR. TISI:
15	A. No. No.	15	Q. Did you need to see it in your
16	Q. Did you get permission of	16	report in order to say what it says?
17	approval from Johns Hopkins to participate in	17	MS. MILLER: Objection.
18	this litigation?	18	THE WITNESS: I didn't
19	MS. MILLER: Objection.	19	specifically remember saying that.
20	THE WITNESS: That's not	20	QUESTIONS BY MR. TISI:
21	something that I would need approval	21	Q. Okay. It doesn't matter
22	through Johns Hopkins for.	22	because my question was, is it a seminal
23	(Merlo Exhibit 14 marked for	23	article? I didn't ask you whether you said
24	identification.)	24	it in your report.
25		25	Why is it so hard to answer a
	Page 171		Page 173
1	QUESTIONS BY MR. TISI:	1	simple question as whether or not this is a
2	Q. Going back to your opinions	2	seminal article?
3	about talc, I'd like to attach as Exhibit 14	3	MS. MILLER: Objection.
4	the Bradford Hill article I think you had in	4	Is that actually a question
5	front of you, but I'm going to attach it as	5	you're asking?
6	Exhibit Number 14.	6	MR. TISI: Yes. Absolutely.
7	A. Thank you.	7	QUESTIONS BY MR. TISI:
8	Q. Is this the Bradford Hill	8	Q. Why is it so hard to answer
9	article that you have been referring to?	9	that question?
10	A. This is one of many of Bradford	10	MS. MILLER: Objection.
11	TT'111 1	11	
	Hill's articles.	1	MR. LOCKE: Objection.
12	Q. Okay.	12	QUESTIONS BY MR. TISI:
	Q. Okay.A. This is his discussion of	1	
12 13 14	Q. Okay.A. This is his discussion ofthe what we call nowadays the Bradford	12 13 14	QUESTIONS BY MR. TISI: Q. Without seeing it in your report?
12 13 14 15	Q. Okay.A. This is his discussion ofthe what we call nowadays the BradfordHill analysis.	12 13 14 15	QUESTIONS BY MR. TISI: Q. Without seeing it in your report? MS. MILLER: Objection.
12 13 14 15 16	 Q. Okay. A. This is his discussion of the what we call nowadays the Bradford Hill analysis. Q. This is what you called the 	12 13 14 15 16	QUESTIONS BY MR. TISI: Q. Without seeing it in your report? MS. MILLER: Objection. Now that the question has been
12 13 14 15	 Q. Okay. A. This is his discussion of the what we call nowadays the Bradford Hill analysis. Q. This is what you called the seminal article, right? 	12 13 14 15 16 17	QUESTIONS BY MR. TISI: Q. Without seeing it in your report? MS. MILLER: Objection. Now that the question has been amended, still objection.
12 13 14 15 16 17	 Q. Okay. A. This is his discussion of the what we call nowadays the Bradford Hill analysis. Q. This is what you called the seminal article, right? MR. LOCKE: Objection. 	12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. Without seeing it in your report? MS. MILLER: Objection. Now that the question has been amended, still objection. THE WITNESS: I thought you had
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	Page 174		Page 176
1	And why is that such a hard	1	you?
2	question to answer?	2	It's the second paragraph.
3	MS. MILLER: Objection.	3	A. I see that.
4	MR. LOCKE: Objection.	4	Q. Right.
5	THE WITNESS: It's probably one	5	What does the first paragraph
6	of his seminal articles.	6	say?
7	QUESTIONS BY MR. TISI:	7	A. We can read it if you'd like.
8	Q. Okay. You didn't address the	8	Q. Why don't you.
9	question of biologic plausibility in your	9	A. "I have no wish, nor the skill,
10	report, did you?	10	to embark upon a philosophical discussion of
11	A. So I did not speak about	11	the meaning of causation. The cause of
12	biologic plausibility in my report.	12	illness may be immediate, indirect, it may be
13	Q. Okay. Did you I'm sorry.	13	remote and indirect, underlying the observed
14	A. And you can go ahead.	14	association, but with the aims of
15	Q. Did you address the question of	15	occupational and almost synonymously
16	specificity?	16	preventive medicine in mind, the decisive
17	A. There are several aspects of	17	question is whether the frequency of the
18	the Bradford Hill considerations that are	18	undesirable event, B, will be influenced by a
19	inherently irrelevant in the analysis.	19	change in the environmental factor, A. How
20	And the reason for that is if	20	such a change exerts that influence may call
21	we if we just back up a little bit, first	21	for a great deal of research. However,
22	of all, Bradford Hill said that you need to	22	before deducing causation and taking action,
23	have a clearcut association before even going	23	we shall not have invariably have to sit
24	into that and	24	around awaiting the results of that research.
25	Q. Aren't there plenty of examples	25	The whole chain may have to be unraveled or a
	Page 175		Page 177
1	of cases where a exposure there is no	1	few links may suffice. It will depend on
2	epidemiology studies where there is a	2	circumstances."
			circumstances." Q. Okay. So and circumstances
2 3 4	epidemiology studies where there is a clearcut association? I'll give you an example:	2 3 4	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of
2 3 4 5	epidemiology studies where there is a clearcut association? I'll give you an example: Acetaminophen and liver disease, do you know	2 3 4 5	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of evidence on one factor and a lot of evidence
2 3 4 5 6	epidemiology studies where there is a clearcut association? I'll give you an example: Acetaminophen and liver disease, do you know of any epidemiology study which establishes	2 3 4 5 6	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of evidence on one factor and a lot of evidence on another factor, right?
2 3 4 5 6 7	epidemiology studies where there is a clearcut association? I'll give you an example: Acetaminophen and liver disease, do you know of any epidemiology study which establishes that risk?	2 3 4 5	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of evidence on one factor and a lot of evidence on another factor, right? MS. MILLER: Objection.
2 3 4 5 6	epidemiology studies where there is a clearcut association? I'll give you an example: Acetaminophen and liver disease, do you know of any epidemiology study which establishes that risk? MS. MILLER: Objection.	2 3 4 5 6 7 8	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of evidence on one factor and a lot of evidence on another factor, right? MS. MILLER: Objection. QUESTIONS BY MR. TISI:
2 3 4 5 6 7	epidemiology studies where there is a clearcut association? I'll give you an example: Acetaminophen and liver disease, do you know of any epidemiology study which establishes that risk?	2 3 4 5 6 7 8 9	circumstances." Q. Okay. So and circumstances are, there are sometimes we have a lot of evidence on one factor and a lot of evidence on another factor, right? MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. These are considerations. No
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Christian Merlo, M.D., MPH

Page 178 Page 180 1 care to attribute the play of chance." 1 epidemiologic studies that looked at 2 Q. Now, before we discuss your 2 different subtypes. 3 experience any further, I want to ask you to 3 Q. And serous cancers were more go back to the front page of your report. 4 associated at a higher rate than other 4 The front page of your report, 5 5 ovarian cancers, correct? Exhibit 3, says -- actually, let me just go 6 6 A. It depends on which study we're back and ask this question. 7 looking at. We'd have to go through all of 7 8 On the Bradford Hill, you said 8 them. 9 you didn't discuss the biologic evidence with 9 O. Okay. But would it -- you 10 respect to talc and ovarian cancer, and it's 10 didn't do that for the purposes of -- you not in your report, correct? didn't look at whether or not the evidence --11 11 there was evidence of specificity to -- for 12 MS. MILLER: Objection. 12 13 THE WITNESS: I did not. 13 example, epithelial ovarian cancer as opposed to other kinds of cancers? 14 **QUESTIONS BY MR. TISI:** 14 15 Q. Okay. Did you -- I'm sorry, I 15 A. That's not --16 thought you were finished. 16 MS. MILLER: Objection. 17 A. No, I did not discuss biologic 17 THE WITNESS: That's not plausibility, and the reason is -- I said 18 18 exactly what Bradford Hill is talking about when talking about specificity. 19 before one could make the case of not even 19 20 performing a Bradford Hill analysis, but for QUESTIONS BY MR. TISI: 20 21 the sake of what other experts did, I went 21 O. Okay. 22 through strength of association, consistency 2.2 A. The term "specificity" is 23 and dose response. 23 referred -- the term "specificity" is talking about a specific exposure causing a certain 24 And with a lack of strength of 24 disease, and there are certain diseases that 25 association, with a lack of consistency 25 Page 179 Page 181 1 between studies and with a lack of dose 1 have lots of things that can cause them. 2 response, biologic plausibility doesn't 2 But if there is one disease 3 matter because there's no causal association 3 that only one exposure causes, then that's 4 between talcum powder and ovarian cancer 4 what specificity means. Not specificity in 5 5 based on the medical literature. the different type of ovarian cancer. 6 6 Q. So you don't think it's So let me ask you this: Is the 7 7 issue of specificity important? relevant to look at whether or not a For example, wouldn't it be 8 8 association is correlated more specifically 9 9 important to consider whether or not the with the type of ovarian cancer as opposed to 10 studies that did show an association were 10 ovarian cancer generally for the purposes of 11 specific to a particular type of cancer and 11 trying to figure out whether or not there not others? Because that would -- that 12 really was bias in these studies? 12 question would argue against the issue of 13 MS. MILLER: Objection. 13 recall bias, for example. 14 THE WITNESS: I don't even 14 15 A. You asked several questions 15 understand what you just asked me. QUESTIONS BY MR. TISI: 16 there, so if you could just break that down, 16 17 it would be helpful. 17 Q. Okay. You didn't look at --18 O. I'll break it down. 18 you didn't look at analogy, did you? 19 Wouldn't it be important to 19 MS. MILLER: Objection. 20 consider the issue of specificity? 20 THE WITNESS: Analogy, again, is -- you'd have to look at something 21 You know that many of these 21 exactly similar to talc, and there's 22 studies broke down their analysis -- tried to 22 23 nothing analogous there that --23 break down their analysis by subtype of QUESTIONS BY MR. TISI: 24 ovarian cancer, correct? 24 25 There were several 25 Q. But you didn't address it in

46 (Pages 178 to 181)

	Page 182		Page 184
1	your report is my question.	1	A. So, first of all, it says
2	A. I did not address it.	2	"perfectly clearcut."
	Q. And you didn't address the	3	Q. I understand you quoted him,
3 4 5 6 7 8	specificity factor, correct?	4	and I'm asking you I'm not asking you what
5	A. Again, specificity in this	5	he meant because I think it's article is
6	case, as in cases of other diseases where	6	pretty clear when he meant.
7	there are a number of potential risk factors,	7	I'm asking you: In the next
8	it's not appropriate to look at specificity.	8	sentence where you pulled out the word
9	Q. Doctor, my question is: You	9	"clearcut," what do you mean?
10	didn't address it in your report at all?	10	MS. MILLER: Objection.
11	MS. MILLER: Please don't	11	THE WITNESS: One that is
12	interrupt him.	12	beyond that we would attribute to the
13	THE WITNESS: It's inherent in	13	play of chance.
14	there.	14	And based on the body of
15	QUESTIONS BY MR. TISI:	15	medical evidence and the inconsistency
16	Q. Okay. It's not addressed	16	within certain study designs and
17	specifically in your report, is it?	17	between certain study designs, the
18	MS. MILLER: Objection.	18	association is not clearcut.
19	QUESTIONS BY MR. TISI:	19	QUESTIONS BY MR. TISI:
20	Q. You didn't say, "I address the	20	Q. How do you define "clearcut"?
21	specificity factor, and it doesn't apply or	21	In other words, when you say
22	it does apply" for the following reasons?	22	"play of chance," that's a statistical
23	MS. MILLER: Objection.	23	concept.
24	THE WITNESS: Again, there is	24	Chance is defined typically by
25	not a line item that says specificity,	25	P value, correct, of .05?
	Page 183		Page 185
	,		rage 100
1	and because of and the reason for	1	A. Chance is defined as a about
2	and because of and the reason for that is because there's no strength of	1 2	A. Chance is defined as a about a 1 and 20 chance.
	and because of and the reason for that is because there's no strength of association, there's no consistency		A. Chance is defined as a about a 1 and 20 chance. Q. Right. A .05 P value, right?
2 3 4	and because of and the reason for that is because there's no strength of association, there's no consistency within studies, and there's no dose	2	 A. Chance is defined as a about a 1 and 20 chance. Q. Right. A .05 P value, right? A. Statistically, yes.
2 3 4 5	and because of and the reason for that is because there's no strength of association, there's no consistency within studies, and there's no dose response to within the studies.	2 3	 A. Chance is defined as a about a 1 and 20 chance. Q. Right. A .05 P value, right? A. Statistically, yes. Q. Okay. And so is that what you
2 3 4 5 6	and because of and the reason for that is because there's no strength of association, there's no consistency within studies, and there's no dose response to within the studies. And so without those things	2 3 4	 A. Chance is defined as a about a 1 and 20 chance. Q. Right. A .05 P value, right? A. Statistically, yes. Q. Okay. And so is that what you mean when you say "a clearcut association"?
2 3 4 5 6 7	and because of and the reason for that is because there's no strength of association, there's no consistency within studies, and there's no dose response to within the studies.	2 3 4 5	 A. Chance is defined as a about a 1 and 20 chance. Q. Right. A .05 P value, right? A. Statistically, yes. Q. Okay. And so is that what you mean when you say "a clearcut association"? You're talking a statistically
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1	QUESTIONS BY MR. TISI:	1	study types over a period of time that
2	Q. I'm not asking you in this	2	show some show something and some show
3	case.	3	another, that's inconsistent, and that
4	I'm asking you, generally	4	Q. What do they show here that
5	speaking, when you say the requirement is not	5	makes them inconsistent?
6	satisfied here okay, because it's not	6	MS. MILLER: Objection. He's
7	presented with a clearcut association.	7	really please let him finish his
8	I'm asking you, generally	8	sentences.
9	speaking, if you're if I'm a student at	9	THE WITNESS: Can you be more
10	Johns Hopkins and I see this sentence and I	10	specific?
11	ask you raise my hand and say, "Doctor,	11	QUESTIONS BY MR. TISI:
12	can you tell me what is meant by a clearcut	12	Q. Yeah. You just made
13	association? What is meant by that?" how	13	MS. MILLER: You were in the
		14	
14	would you what would you tell me?	1	middle of a sentence.
15	Without reference to any	15	QUESTIONS BY MR. TISI:
16	specific case, what is meant by clearcut	16	Q. You just made the statement,
17	association?	17	"Some show something and some show another,
18	MS. MILLER: Objection.	18	that's inconsistent."
19	THE WITNESS: I would say it	19	My question is, what: Here
20	depends. It depends on what we're	20	what is the "something" you're referring to?
21	looking at, what exposure and outcome	21	A. Well, if we're specifically
22	relationship we're looking at. It	22	talking about the potential causal
23	depends what's available in the	23	association between talcum powder and ovarian
24	medical evidence. It depends on how	24	cancer, there are hospital-based case-control
25	the study or the initial work was set	25	studies that are all not statistically
	7 105		
	Page 18/		Page 189
	Page 187		Page 189
1	up. It depends on whether or not bias	1	significant.
2	up. It depends on whether or not bias and confounding were taken care of.	2	significant. There are population-based
2 3	up. It depends on whether or not bias and confounding were taken care of. It depends on so many factors	2 3	significant. There are population-based case-control studies; some are statistically
2 3 4	up. It depends on whether or not bias and confounding were taken care of. It depends on so many factors that it makes it impossible to even	2 3 4	significant. There are population-based case-control studies; some are statistically significant, some are not.
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1 suggestion of plaintiffs' experts, in 2 parentheses, that this criterion" and the 3 criterion we're talking about is 4 consistency "to weigh in favor finding 5 causal association must be consistency in Page 190 1 difficult to prove causality. QUESTIONS BY MR. TISI: 3 Q. So is an underlying principle you say it's important remember here that a statistic	
parentheses, that this criterion" and the criterion we're talking about is question we're t	Page 192
parentheses, that this criterion" and the criterion we're talking about is Q. So is an underlying consistency "to weigh in favor finding principle you say it's important principle you say it's impor	
3 criterion we're talking about is 3 Q. So is an underlying 4 consistency "to weigh in favor finding 4 principle you say it's important."	
4 consistency "to weigh in favor finding 4 principle you say it's importa	
	ant to
6 statistically significant associations." 6 significant result is inconsistent	
7 And you have that in bold, 7 statistically insignificant result	
8 correct? 8 MR. LOCKE: Objection	
9 A. Are we reading the first 9 MS. MILLER: Objection	
10 sentence? 10 THE WITNESS: Can	
11 Q. Correct. 11 again?	you say mat
12 A. Okay. Can I read it? 12 QUESTIONS BY MR. TISI:	
, , ,	
16 Q. No, I just read it. 16 statistically insignificant result,	, are they
17 A. I was flipping through, trying 17 by definition inconsistent?	•
18 to 18 MS. MILLER: Objects	
19 Q. That's okay. Let me read it 19 THE WITNESS: I thin	
20 again. 20 depends. If you get 20 stud	lies, and
You state, "It is important to 21 10 of them are statistically	
remember, contrary to the suggestion of 22 significant and 10 are not	_
several of plaintiffs' experts, that for this 23 statistically significant, that	t's
24 criterion to weigh in favor of finding a 24 inconsistent.	
25 causal relationship, there must be 25	
Page 191	Page 193
1 consistency in statistically significant 1 QUESTIONS BY MR. TISI:	
2 associations." 2 Q. Okay. Have you done	a
3 And you have that in bold, 3 meta-analysis?	
4 correct? 4 A. I have.	
5 A. That's correct. 5 Q. Okay. Have you ever p	published
6 Q. Okay. And the report that you 6 a meta-analysis?	
7 cite there is I'm sorry, you don't cite 7 A. I have not.	
8 anything for that. 8 Q. Are you a biostatisticia	ın?
9 Can you tell me your basis for 9 A. I've taken courses in	
10 that 10 biostatistics. I don't consider my	yself a
MS. MILLER: Objection. 11 biostatistician, but oftentimes the	
,	
12 OUESTIONS BY MR. TISI: 12 link between epidemiology and by	
13 Q statement? 13 So I do a lot of my statistical ana	
13 Q statement? 13 So I do a lot of my statistical and MS. MILLER: Objection. 14 myself. I don't consider myself a	
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	Page 194		Page 196
1	myself a biostatistician.	1	an infection at age 1, and we follow
2	QUESTIONS BY MR. TISI:	2	them for 20 years.
3	Q. Okay. By virtue of being	3	Sometimes we ask about things
4	would you agree with me that though there is	4	and we follow people for an
5	overlap between the two professions you	5	appropriate amount of time, but they
6	guys need each other, right? it is not	6	may have been exposed to that prior to
7	necessarily the case that a biostatistician	7	that. So it really depends.
8	is an epidemiologist and an epidemiologist is	8	QUESTIONS BY MR. TISI:
9	a biostatistician?	9	Q. Now, I asked you a couple of
10	MS. MILLER: Objection.	10	questions before about the role of
11	MR. LOCKE: Objection.	11	professional judgment in looking at the
12	THE WITNESS: That's pretty	12	Bradford Hill guidelines.
13	general. I mean, there are probably	13	Do you remember those
14	people out there that are both.	14	questions?
15	QUESTIONS BY MR. TISI:	15	A. Not specifically, no.
16	Q. And there are some that are one	16	Q. Okay. Well, I'm going to turn
17	and not the other, correct?	17	to that question now. I told you I'd come
18	A. I have no idea. It's not	18	back to it, and I'm going to come back to it
19	something I think about.	19	now.
20	Q. Okay. What is the latency of	20	Did you use when looking at
21	ovarian cancer between something that may	21	all of this evidence that you looked at, did
22	cause it and something that and the onset	22	you use any degree of professional judgment
23	of disease?	23	in analyzing the question of whether or not
24	MS. MILLER: Objection.	24	talcum powder products cause ovarian cancer?
25	THE WITNESS: I don't think	25	A. I don't know what you mean by
	THE WITHESS. I don't tillink		The Facility what you mean by
	Page 195		Page 197
1		1 1	
1 2	anybody knows the latency of ovarian	1 2	"professional judgment." What I did is I reviewed the
2	anybody knows the latency of ovarian cancer and first of all, you'd have	1 2 3	"professional judgment." What I did is I reviewed the
2 3	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have	1 2 3 4	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked
2 3 4	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have to say what risk factor you're talking	1 2 3 4 5	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked at how the studies were designed, whether or
2 3 4 5	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have to say what risk factor you're talking about. Is it risk factor X, and do we	1 2 3 4 5 6	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked at how the studies were designed, whether or not they controlled for bias or adjusted for
2 3 4	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have to say what risk factor you're talking about. Is it risk factor X, and do we know that, has that been studied?	1 2 3 4 5 6	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked at how the studies were designed, whether or not they controlled for bias or adjusted for potential confounding, sample size in
2 3 4 5 6	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have to say what risk factor you're talking about. Is it risk factor X, and do we know that, has that been studied? So talking about the latency of	1 2 3 4 5 6 7 8	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked at how the studies were designed, whether or not they controlled for bias or adjusted for
2 3 4 5 6 7	anybody knows the latency of ovarian cancer and first of all, you'd have to not just say something, you'd have to say what risk factor you're talking about. Is it risk factor X, and do we know that, has that been studied? So talking about the latency of ovarian cancer with such generalities,	_	"professional judgment." What I did is I reviewed the literature. I read the articles. I looked at how the studies were designed, whether or not they controlled for bias or adjusted for potential confounding, sample size in studies, the differences in population between the case-control studies, the number
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	Page 198	1	Page 200
1		1	
1	design, number of patients enrolled, all		because it's one of my textbooks. I'm
2	those things that you just mentioned? You	2	not here to provide opinions on
3	listed a bunch of them.	3	whether or not I think a textbook is
4	Can you think of any gap in	4	authoritative. I'm here to give you
5	their report where they didn't consider the	5	my opinion on the medical evidence.
6	things you considered?	6	(Merlo Exhibit 22 marked for
7	MS. MILLER: Objection.	7	identification.)
8	THE WITNESS: You'd have to	8	QUESTIONS BY MR. TISI:
9	show where what we're what you're	9	Q. Well, you cited a textbook
10	asking me about.	10	okay. Let me ask you this. Let me look at
11	QUESTIONS BY MR. TISI:	11	Exhibit 22.
12	Q. No, I'm not going to do that,	12	Here is a it's called
13	Doctor.	13	Epidemiology, Concepts and Methods.
14	I'm asking can you think of any	14	Do you see that, Doctor? I
15	as you sit here right now?	15	just included the cover page.
16	MS. MILLER: Objection. Asked	16	MS. MILLER: I'm going to
17	and answered.	17	
18		18	object to this exhibit. It is two
	THE WITNESS: Without us going		pages pulled from a book, and the
19	through the specifics, I can't answer	19	second page ends in the middle of a
20	that general question.	20	sentence.
21	QUESTIONS BY MR. TISI:	21	MR. TISI: I'm not asking that
22	Q. So do you agree that it is	22	question. Why don't you
23	well-understood that Hill's postulates are	23	MS. MILLER: I just don't think
24	ones in which experts will always apply	24	it's a proper exhibit.
25	professional judgment?	25	MR. TISI: I know you don't
	Page 199		Page 201
1	A. I don't what are you	1	think so. You don't think anything is
2	referring to?	2	proper.
3	Q. Well, let me ask you this: In	3	But I'm going to ask why
4	your report you refer oftentimes to a	4	don't you wait until I ask my
5	textbook by William Oleckno.	5	question, and then we can figure out
6	Do you know that	6	whether or not I'm doing something
7	A. The textbook?	7	improper or not.
8	Q. Yeah.	, 8	MS. MILLER: I'm objecting to
9		9	the exhibit, not to the question.
		10	
10	Q. Okay.	11	MR. TISI: Okay. That's fine. I'm objecting to your objections
11	MS. MILLER: If we're going to	<u> </u>	
1 7 7		1	
12	move on to a new subject, lunch has	12	because I think they're ridiculous.
13	move on to a new subject, lunch has been waiting for a while, so maybe	12 13	because I think they're ridiculous. MS. SHARKO: Please be
13 14	move on to a new subject, lunch has been waiting for a while, so maybe MR. TISI: Well, I just opened	12 13 14	because I think they're ridiculous. MS. SHARKO: Please be professional.
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13 14 15 16	move on to a new subject, lunch has been waiting for a while, so maybe MR. TISI: Well, I just opened up a can of worms here, so I'm going to just give me about five, ten	12 13 14 15 16	because I think they're ridiculous. MS. SHARKO: Please be professional. MR. TISI: Oh, I'm very professional, Counsel, except when
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51 (Pages 198 to 201)

	Dama 202		Dama 204
_	Page 202		Page 204
1	QUESTIONS BY MR. TISI:	1	association, correct? Temporal sequence,
2	Q. So there is a paragraph here on	2	temporality?
3	page 188, and I'm going to ask you whether	3	A. We're talking about that last
4	you agree with it or not, and I'm going to	4	sentence there?
5	ask you to read it.	5	Q. Yes, correct.
6	It says	6	A. "In the end, the process of
7	A. So what am I looking at here?	7	determining causation is largely subjective
8	Q. On page 188, Chapter 7.	8	except for the first guideline, which is
9	A. No, what is this exhibit?	9	actually a requirement."
10	Q. It is a it is a it is a	10	Q. And the first guideline is
11	page of Chapter 7, Association, Causation in	11	correct temporal sequence?
12	Epidemiology.	12	A. I'm not sure what it's
13	There's a chapter from	13	referring to, but I see "correct temporal
14	Dr. Oleckno's book.	14	sequence" right below that.
15	A. Okay. So I see a photocopy of	15	Q. All right. Do you disagree
16	what appears to be the cover of the book.	16	that the determination of causation is
17	Q. The first chapter the first	17	largely subjective, if using Hill's
18	page of the chapter.	18	postulates?
19	A. Of Chapter 7.	19	A. Can you ask that again?
20	Q. And there's a paragraph on	20	Q. Yeah.
21	Bradford Hill. Okay?	21	Do you believe that the
22	And I'm going to ask you about	22	ultimate decision on causation requires is
23	the paragraph that he writes on Bradford	23	a subjective look at the evidence?
24	Hill. It's the only paragraph that he talks	24	MS. MILLER: Objection.
25	about Bradford Hill.	25	THE WITNESS: I'm not I'm
	Page 203		Page 205
1	MS. MILLER: Objection. We	1	sorry, I'm just not understanding what
2	MR. TISI: That's fine.	2	you're asking.
3	QUESTIONS BY MR. TISI:	3	QUESTIONS BY MR. TISI:
4	O. "On 1965, Sir Bradford Hill,		-
	,	4	Q. Okay. Do you agree with the
5	professor emeritus at the medical statistics	5	sentence that the last sentence. "In the
6	professor emeritus at the medical statistics with the University of London, delivered a	5 6	sentence that the last sentence. "In the end, the process of determining causation is
6 7	professor emeritus at the medical statistics with the University of London, delivered a landmark address where he outlined nine	5 6 7	sentence that the last sentence. "In the end, the process of determining causation is largely subjective except for the first
6 7 8	professor emeritus at the medical statistics with the University of London, delivered a landmark address where he outlined nine criteria that could be used to determine if	5 6 7 8	sentence that the last sentence. "In the end, the process of determining causation is largely subjective except for the first guideline, which is actually a requirement"?
6 7 8 9	professor emeritus at the medical statistics with the University of London, delivered a landmark address where he outlined nine criteria that could be used to determine if statistical associations were likely to	5 6 7 8 9	sentence that the last sentence. "In the end, the process of determining causation is largely subjective except for the first guideline, which is actually a requirement"? MS. MILLER: Objection.
6 7 8 9 10	professor emeritus at the medical statistics with the University of London, delivered a landmark address where he outlined nine criteria that could be used to determine if statistical associations were likely to represent causal associations. His reasoning	5 6 7 8 9	sentence that the last sentence. "In the end, the process of determining causation is largely subjective except for the first guideline, which is actually a requirement"? MS. MILLER: Objection. THE WITNESS: I see that
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	Page 206		Page 208
1	relationship. It's a very, very general	1	Q. And Dr. Gordis, again, is
2	question	2	the was the head of the department for
3	Q. Okay.	3	epidemiology at Johns Hopkins, correct?
4	A and a photocopy of one page	4	A. You know, I don't remember. I
5	in a textbook that I don't have memorized.	5	know he taught one of my courses.
6	(Merlo Exhibit 23 marked for	6	Q. He's a big deal, isn't he?
7	identification.)	7	A. I can't remember if he was the
8	QUESTIONS BY MR. TISI:	8	head of the department of epidemiology.
9	Q. Well, let's look at exhibit	9	Q. He's a big deal. He was well
10	number let's look at Exhibit Number 23,	10	known, a well-known epidemiologist?
11	which is the textbook by Dr. Gordis. And I	11	A. I took his course, I mean, but
12	do have the whole chapter here, so feel free	12	I don't know what you mean by "big deal." I
13	to thumb through it.	13	don't
14	MS. MILLER: Is this a good	14	Q. You don't think he's okay.
15	time for lunch? You said it was just	15	Do you you don't understand what his
16	five minutes. It's been five minutes.	16	reputation was in the community?
17	MR. TISI: Okay.	17	A. Again
18	MS. MILLER: Do you want to do	18	MR. LOCKE: Objection.
19	that after lunch?	19	MS. MILLER: Objection.
20	MR. TISI: I would prefer to	20	QUESTIONS BY MR. TISI:
21	finish it now, but if you feel like	21	Q. Let me ask you what you
22	you're you absolutely need to have	22	think you're here for, candidly, is not as
23	lunch right now, if the witness does,	23	important to me as you answering my
24	I'm absolutely okay with that.	24	questions. Because what I may think
25	MS. MILLER: We've been going	25	important or you may think important and what
	Page 207		Page 209
1	an hour and 40 minutes. That's a long	1	Ms. Miller may think important are different.
2	time.	2	So I'm going to ask this
3	What do you think, Susan?	3	question: Do you have an understanding of
4	MS. SHARKO: Yeah.	4	the reputation of Dr. Gordis?
5		1	<u> </u>
	MR. TISI: It's up to you. I	5	MS. MILLER: Objection.
6	said I'm okay with it.	5 6	MS. MILLER: Objection. MR. LOCKE: Objection.
6 7	said I'm okay with it. MS. SHARKO: Thank you.	5 6 7	MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: And I'll state
6 7 8	said I'm okay with it. MS. SHARKO: Thank you. VIDEOGRAPHER: All right. The	5 6 7 8	MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: And I'll state that I took a course by Dr. Gordis in
6 7 8 9	said I'm okay with it. MS. SHARKO: Thank you. VIDEOGRAPHER: All right. The time is 12:18 p.m. We're going off	5 6 7 8 9	MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: And I'll state that I took a course by Dr. Gordis in epidemiology. It was Epidemiology I.
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	Page 210		Page 212
1	QUESTIONS BY MR. TISI:	1	you have an opinion, I'm entitled to ask it.
2	Q. What is your assessment then?	2	Unless counsel tells you that you can't
3			
	MS. MILLER: Same objection.	3	answer it, you have to answer it.
4	THE WITNESS: What I can say	4	So my question is: Do you have
5	what I can say is that he was a	5	an opinion as to whether or not Dr from
6	professor of mine. I learned a great	6	your perspective, he is an authority in the
7	deal from the class that I took that	7	field of epidemiology?
8	he taught, and he was a member of the	8	MS. MILLER: Objection.
9	faculty at Johns Hopkins Bloomberg	9	MR. LOCKE: Objection.
10	School of Public Health.	10	MS. MILLER: I'm going to
11	But as far as reputation and	11	object on multiple grounds, one of
12	those things, that's I don't have	12	which is asked and answered.
13	an opinion about it.	13	THE WITNESS: He was a
14	QUESTIONS BY MR. TISI:	14	professor of mine who taught a course
15	Q. Do you consider him an	15	in Epidemiology I, we used his
16	authority?	16	textbook as one of the references
17	MS. MILLER: Objection.	17	during the class, and I had good
18	QUESTIONS BY MR. TISI:	18	interactions with him during the
19	Q. You personally consider him an	19	class. That's what I have to say
20	• •	20	about Dr. Gordis.
	authority?	21	
21	MS. MILLER: Objection.		QUESTIONS BY MR. TISI:
22	THE WITNESS: I consider	22	Q. So let's look at Chapter 14,
23	Dr. Gordis a professor of mine.	23	Association to Causation: Deriving
24	QUESTIONS BY MR. TISI:	24	Inferences From Epidemiologic Studies.
25	Q. Well, he was a professor of	25	That's what we're doing here
		-	
	Page 211		Page 213
1		1	
1 2	yours, and so I'm asking you: Do you	1 2	today, right? We're deriving we're seeing
2	yours, and so I'm asking you: Do you consider him to be an authority in the field		today, right? We're deriving we're seeing whether or not there's an inference from the
2	yours, and so I'm asking you: Do you consider him to be an authority in the field of epidemiology?	2	today, right? We're deriving we're seeing whether or not there's an inference from the epidemiologic studies?
2 3 4	yours, and so I'm asking you: Do you consider him to be an authority in the field of epidemiology? MS. MILLER: Objection.	2 3 4	today, right? We're deriving we're seeing whether or not there's an inference from the epidemiologic studies? MS. MILLER: Objection.
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2 3 4 5 6	yours, and so I'm asking you: Do you consider him to be an authority in the field of epidemiology? MS. MILLER: Objection. THE WITNESS: Dr. Gordis was an epidemiologist. He's since passed.	2 3 4 5 6	today, right? We're deriving we're seeing whether or not there's an inference from the epidemiologic studies? MS. MILLER: Objection. THE WITNESS: Can you ask me that question
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	Page 214		Page 216
1	A. 250 now.	1	information needed for doing so. The
2	Q. Yeah.	2	preceding list should therefore be
3	A. 250. Okay. I got it.	3	considered should therefore be considered
4	Q. And see Table 14.1 in those	4	to be only guidelines that can be of most
5		5	• •
6	lists, the five aspects excuse me the	6	value when coupled with reasoned judgment
7	nine aspects of Bradford Hill?	7	about the entire body of available evidence
	A. Yeah, let me just look at them		in making decisions about causation."
8	because there are nine there. I just want to	8	Did I read that correctly?
9	make sure that those are the nine Bradford	9	A. Yes, you did.
10	Hill criteria.	10	Q. Okay. Do you agree with that
11	MR. LOCKE: Objection to the	11	statement?
12	use of this exhibit.	12	MS. MILLER: Objection.
13	THE WITNESS: So I see these	13	MR. LOCKE: Objection.
14	nine I see Table 14.1 stating	14	THE WITNESS: I mean, there are
15	"guidelines for judging whether an	15	so many statements in there, you'd
16	observed association is causal," and I	16	have to ask me specifically if I agree
17	see nine lines there.	17	or disagree with
18	But there are some lines that	18	QUESTIONS BY MR. TISI:
19	are not necessarily those that are	19	Q. Well, do you agree with the
20	those that Bradford Hill spoke about	20	statement that reasoned judgment is important
21	in his article.	21	when interpreting epidemiologic evidence?
22	QUESTIONS BY MR. TISI:	22	MS. MILLER: Objection.
23	Q. Okay. So if you go to the	23	THE WITNESS: I didn't write
24	last after discussing the nine that he	24	this, and I don't know exactly what
25	discusses, at the very end it has a	25	the definition of reasoned judgment
	· · · · · · · · · · · · · · · · · · ·		
	Page 215		D 017
	rage 213		Page 217
1	conclusion.	1	in that's a very vague term.
1 2		1 2	
	conclusion.		in that's a very vague term.
2	conclusion. A. Who are you referring to,	2	in that's a very vague term. QUESTIONS BY MR. TISI:
2 3	conclusion. A. Who are you referring to, Dr. Gordis or	2 3	in that's a very vague term. QUESTIONS BY MR. TISI: Q. Okay.
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55 (Pages 214 to 217)

	Page 218		Page 220
1	that you read before you cited it in your	1	action based on this science and causal
2	report?	2	reasoning."
3	MR. LOCKE: Objection.	3	Do you see that?
4	THE WITNESS: So this	4	A. I do see that.
5	this	5	Q. Okay.
6	QUESTIONS BY MR. TISI:	6	A. And that's why I put this
7	Q. Actually, it's a very simple	7	definition in
8	question: I assume you read it before citing	8	Q. Okay.
9	it?	9	A when I was defining
10	A. I did look at this website from	10	epidemiology, because I said that it's "the
11	the CDC. This definition actually comes out	11	study of the distribution and determinants of
12	of several textbooks, and the reference from	12	health-related states or events in specific
13	those	13	populations and the application of this study
14	Q. Doctor, I didn't ask you that	14	to control health problems."
15	question. I asked you whether you	15	Q. Right.
16	A. I'm giving you an answer.	16	A. And that's what I was looking
17	Q. I just asked you whether you	17	for, is a definition
18	read it.	18	Q. And it also and it also uses
19	A. And so I'm giving you an	19	the word "causal reasoning."
20	answer.	20	A. If I could just finish
21	Where I found this definition	21	Q. Well, I understand, but
22	was in several textbooks. When I looked back	22	A because I'm giving you an
23	to the reference, it referenced this lesson.	23	answer.
24	Did I read this entire thing?	24	Q. You're not I asked you about
25	I don't recall. I know that I did look this	25	a particular sentence. Okay? I didn't ask
	Page 219		D 001
	1490 219		Page 221
1	up on the CD's website CDC's website and	1	you why you used it. I didn't ask you you
1 2	up on the CD's website CDC's website and did take this definition from one or the	1 2	you why you used it. I didn't ask you you need to I'm perfectly happy to let you
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56 (Pages 218 to 221)

Christian Merlo, M.D., MPH

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	Page 222		Page 224
1	MS. MILLER: Objection.	1	epidemiologist uses the scientific methods of
2	THE WITNESS: I would like to	2	descriptive and analytic epidemiology as well
3	preface this by saying I am listening	3	as experience, epidemiologic judgment and
4	to your questions.	4	understanding of local conditions in
5	QUESTIONS BY MR. TISI:	5	diagnosing the health of a community and
6	Q. Okay. So I'm going to ask you	6	proposing appropriate practical and
7	to listen closer because the answers are not	7	acceptable public health interventions to
8	answering my question.	8	control and prevent disease in a community."
9	So now let me ask you this	9	First of all, did I read that
10	question	10	right?
11	MR. LOCKE: Objection.	11	A. You did read that correctly off
12	QUESTIONS BY MR. TISI:	12	the page.
13	Q again, and it's a very	13	Q. Does it use the word does it
14	simple one.	14	make the statement that it that
15	Do you agree with the following	15	epidemiologists use scientific methods of
16	statement, quote, "Epidemiology is not just a	16	descriptive and analytic epidemiology as well
17	research activity but an integral component	17	as experience and epidemiologic judgment?
18	of public health, providing the foundation	18	Does it not say that?
19	for directing practical and appropriate	19	MS. MILLER: Objection.
20	public health action based on this science	20	THE WITNESS: It says,
21	and causal reasoning, close quote."	21	"Similarly, the epidemiologist uses
22	Do you agree with that?	22	the scientific methods of descriptive
23	A. It's a statement that's in	23	and analytic epidemiology as well as
24	this off the website.	24	experience, epidemiologic judgment and
25	Q. And do you agree with it?	25	understanding of local conditions in
	Page 223		Page 225
1	A. I mean, there's so many aspects	1	diagnosing the health of a community
2	to that statement	2	and proposing appropriate practical
3	Q. I understand.	3	and acceptable public health
4	A that make it difficult to	4	interventions to control and prevent
5	agree or disagree with. It depends. It	5	disease in the community."
6	Q. Okay.	6	QUESTIONS BY MR. TISI:
7	A. I didn't write it, so I	7	Q. Do you agree with it?
8	Q. Now let's go to the end where	8	A. I mean, in general, that seems
9	it says, "Application" on the last page	9	like a statement that that's why we use
10	before the summary.	10	epidemiology.
11	Application. Do you see the	11	Q. Okay.
12	paragraph? Let's see if we can read it	12	A. I didn't write this. There's
13	together.	13	no reference there. There's this is a
14	"Epidemiology is not just the	14	very, very general statement.
15	study of," in quotes, "public health in a	15	Q. Okay. I agree.
16	population. It also involves applying the	16	But you cited this particular
17	knowledge gained by the studies to	17	document in your report, and I'm asking you
18	community-based practice. Like the practice	18	about it.
19	of medicine, the practice of epidemiology is	19	In fact, you make a lot of
20	both a science and an art. To make a proper	20	statements in your report that aren't cited
21	diagnosis and to prescribe appropriate	21	either, right?
22	treatment for a patient, the clinician	22	MS. MILLER: Objection.
23	combines medical, scientific knowledge with	23	THE WITNESS: You asked several
24	experience, clinical judgment and	24	questions there.
			T
25	understanding of the patient. Similarly, the	25	
25	understanding of the patient. Similarly, the	25	

57 (Pages 222 to 225)

	Page 226		Page 228
1	QUESTIONS BY MR. TISI:	1	epidemiology.
2	Q. Well, okay. You make a lot of	2	QUESTIONS BY MR. TISI:
3	statements in your report that aren't cited	3	Q. Understood. I get it. I get
4	either, don't you?	4	it.
5	We just talked about the	5	Now I'm asking you: In the
6	statistical significance paragraph, the one	6	document that you cited is another statement.
7	that's important to note. There was not a	7	Do you agree with it or not agree with it?
8	citation there either, right?	8	MS. MILLER: Objection.
9	MR. LOCKE: Objection.	9	QUESTIONS BY MR. TISI:
10	MS. MILLER: Objection.	10	Q. And if you don't agree with it,
11	THE WITNESS: In that instance	11	I want to know why. And if you do agree with
12	there was not a citation.	12	it, I'm fine with it.
13	QUESTIONS BY MR. TISI:	13	MS. MILLER: Okay. So what's
14	Q. Okay. So the fact that there's	14	the question? Because I
15	no citation, does that make your the	15	QUESTIONS BY MR. TISI:
16	opinion you express in your report invalid?	16	Q. Do you agree with it, or do you
17	A. Not necessarily.	17	don't agree with it?
18	Q. Okay. So	18	MS. MILLER: Objection. Asked
19	A. But	19	and answered.
20	Q. I want to ask you about this	20	THE WITNESS: I think in
21	statement.	21	general it's such a general
22	A. I	22	statement that it depends. It depends
23	Q. Well, I want to ask you about	23	on what we're talking about. It
24	this statement. You answered my question,	24	depends on what the study is doing.
25	saying that there's no	25	It's so general that there's no
23	saying that there's no	23	it s so general that there's no
	Page 227		Page 229
			1490 227
1	A. No, I didn't. No, I didn't. I	1	way to agree or disagree with it.
1 2		1 2	way to agree or disagree with it. QUESTIONS BY MR. TISI:
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58 (Pages 226 to 229)

	Page 230		Page 232
1	You mentioned before that you	1	THE WITNESS: No, we'd have to
2	believe that anorexigens, fenfluramine and	2	look back through the records.
3	dexfenfluramine, can cause primary pulmonary	3	(Merlo Exhibit 25 marked for
4	hypertension, correct?	4	identification.)
5	You remember that testimony?	5	QUESTIONS BY MR. TISI:
6	MR. LOCKE: Objection.	6	Q. My question to you is this:
7	MS. MILLER: Objection. I	7	Did you do the same kind of rigorous analysis
8	don't think that characterizes his	8	of this study that you did of the studies
9	testimony accurately.	9	involving talc?
10	THE WITNESS: As a clinician,	10	MS. MILLER: Objection.
11	when I see patients who have been	11	THE WITNESS: My the reason
12	diagnosed with pulmonary hypertension,	12	that I included this study in my
13	asking about anorexigens is part of my	13	report was because was to was to
14	clinical evaluation because of studies	14	highlight a strength of association.
15	that have looked into the association.	15	QUESTIONS BY MR. TISI:
16	QUESTIONS BY MR. TISI:	16	Q. I understand.
17	Q. Okay. So and I think you	17	A. And an odds ratio of 6.3 that
18	testified before, and the record will reflect	18	actually increases to well, I could look
19	what you testified to, but I think you did	19	here to 23.1 when the drugs were used for
20	testify before that you believed on balance	20	•
21	that there is cause and effect there. But	21	more than three months is a high strength of
		21 22	association.
22	the record will be what the record is.		Q. Okay.
23	Let me ask you this: Are you	23	A. So the reason that I included
24	aware first of all, this is a case-control	24	it was to make the point that it is very,
25	study, correct?	25	very, very difficult, almost impossible, to
	Page 231		Page 233
1	A. It is a case-control study.	1	explain away an odds ratio of 23.1 by some
2	Q. Subject to all the same biases	2	other factor, bias or confounding.
3	that you discussed with respect to the	3	Q. It's funny because I was
4	case-control studies in this case, correct?	4	involved in the litigation involving that,
5	MS. MILLER: Objection.	5	and that's exactly what experts like you
6	THE WITNESS: So some of the	6	said.
7	biases. But we have to remember that	7	But we'll go back let me go
8	this is a medication study, and so the	8	back and ask you this question, Doctor.
9	medications can be looked at in the	9	MS. MILLER: Objection.
10	record, they can be looked as whether	10	MR. LOCKE: Objection.
11	or not someone's been prescribed them.	11	QUESTIONS BY MR. TISI:
12	So it is a little bit different	12	Q. Do you know
13	there in that this is not just	13	MS. MILLER: Enough with the
14	recalling back, this is you can	14	speeches. "Experts like you"? What
15	look to see whether or not people were	15	does that even mean?
16	on medications.	16	MR. TISI: Experts like you,
17	QUESTIONS BY MR. TISI:	17	hired by the companies. Experts like
18	Q. Do you know whether they did	18	you.
19	that?	19	QUESTIONS BY MR. TISI:
20	A. I'd have to read the article	20	Q. Let me ask you
21	again.	21	MR. LOCKE: Objection.
22	Q. Okay. Well, you're just	22	QUESTIONS BY MR. TISI:
23	speculating right now as you're talking?	23	Q. Let me ask you
24	MR. LOCKE: Objection.	24	MS. SHARKO: Please behave the
	•	1	
25	MS. MILLER: Objection.	25	way you would in court.

59 (Pages 230 to 233)

	Page 234		Page 236
1	THE WITNESS: So I've never	1	ratio for you, Dr. Merlo, to say you don't
2	been hired by a company	2	need a second one, it's enough?
3	QUESTIONS BY MR. TISI:	3	MS. MILLER: Objection.
4	Q. Okay.	4	MR. LOCKE: Objection.
5	A to evaluate primary	5	THE WITNESS: So, again, I'm
6	pulmonary hypertension drugs. So I would	6	going to say it depends. It depends
7	appreciate you not labeling me as something	7	on not only the study design, but I
8	that I am not.	8	was going to finish with how the study
9	Q. Okay. So let me ask you this,	9	was going to mish with now the study was conducted. But what plans were
10	Doctor: Are you aware that there was no	10	taken to try to limit bias, what plans
11	first of all, are you aware there's no cohort	11	were taken in the analysis to try to
12	studies involving primary pulmonary	12	adjust for potential confounding, and
13	hypertension anorexigen use?	13	what was done in the analysis. And
14	A. So I'm aware of cohort studies	14	that it depends. It depends on all
15	that have followed patients with pulmonary	15	those things.
16	hypertension, but I'm not aware that they	16	QUESTIONS BY MR. TISI:
17	looked at exposures over time in cohort	17	Q. Let's go to your report at the
18	studies.	18	end the summary paragraph, and we'll go
19	Q. Were you aware that there are	19	elsewhere. I want to address your opinions
20	no other case-control studies; in fact, this	20	about the so-called hierarchy of evidence.
21	is the only one?	21	A. Sure.
22	MR. LOCKE: Objection.	22	Q. On page 46.
23	THE WITNESS: Again, I would	23	A. 46, I got it.
24	have to review the medical literature	24	MS. MILLER: I'm going to
25	to	25	object to that speech.
			J
	Page 235		Page 237
1	QUESTIONS BY MR. TISI:	1	QUESTIONS BY MR. TISI:
2	QUESTIONS BY MR. TISI: Q. Would it surprise you?	1 2	QUESTIONS BY MR. TISI: Q. You say
2	QUESTIONS BY MR. TISI: Q. Would it surprise you? A. I'm sorry?		QUESTIONS BY MR. TISI:
2 3 4	QUESTIONS BY MR. TISI: Q. Would it surprise you? A. I'm sorry? Q. Would it surprise you to know	2 3 4	QUESTIONS BY MR. TISI: Q. You say MR. TISI: No speech.
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	Page 238		Page 240
1	_	1	A. And the reason for that is that
	that there is a hierarchy of evidence.	2	
2	QUESTIONS BY MR. TISI:		there's thought that when a hospital-based
3	Q. Okay. And you also believe	3	case-control study is done, cases and
4	that within case-control studies that	4	controls think about the past in the same
5	hospital-based studies are more reliable than	5	amount; whereas when we have population-based
6	population-control studies?	6	case-control studies, there may be
7	MS. MILLER: Objection.	7	difference differences in recall between
8	THE WITNESS: What are you	8	cases and controls. And that's the
9	referring to?	9	definition of recall bias.
10	QUESTIONS BY MR. TISI:	10	MR. TISI: Okay. I'm going to
11	Q. I'm asking you say here	11	move to strike.
12	MS. MILLER: Can you tell us	12	QUESTIONS BY MR. TISI:
13	what page you're on?	13	Q. My question was in terms of
14	MR. TISI: 46.	14	evidentiary value. Do you place
15	MS. MILLER: Thanks.	15	hospital-based studies having more give
16	Do you have your report?	16	them more weight as a study design than
17	QUESTIONS BY MR. TISI:	17	population-based case-control study designs?
18	Q. In your report you talk about	18	MR. LOCKE: Objection.
19	- · ·	19	QUESTIONS BY MR. TISI:
20	the merits of hospital-based studies	20	Q. For whatever reason. I don't
	versus which in your view showed no		
21	association, and the case-control studies,	21	care what the reason is now.
22	some of which showed an association, the	22	MS. MILLER: Objection.
23	population-based ones?	23	THE WITNESS: So I'll say it
24	MS. MILLER: Is that a	24	depends.
25	question?	25	QUESTIONS BY MR. TISI:
	Page 239		Page 241
1			J
	MD TICL Voc	1	O Okov
	MR. TISI: Yes.	1	Q. Okay.
2	MS. MILLER: Objection.	2	A. And it depends on the how
2 3	MS. MILLER: Objection. THE WITNESS: Can you can	2 3	A. And it depends on the how the study is put together. It depends on
2 3 4	MS. MILLER: Objection. THE WITNESS: Can you can you ask that again? Because I didn't	2 3 4	A. And it depends on the how the study is put together. It depends on what the study investigators used to tried to
2 3 4 5	MS. MILLER: Objection. THE WITNESS: Can you can you ask that again? Because I didn't understand that was a question.	2 3 4 5	A. And it depends on the how the study is put together. It depends on what the study investigators used to tried to limit bias and what the study investigators
2 3 4 5 6	MS. MILLER: Objection. THE WITNESS: Can you can you ask that again? Because I didn't understand that was a question. QUESTIONS BY MR. TISI:	2 3 4 5 6	A. And it depends on the how the study is put together. It depends on what the study investigators used to tried to limit bias and what the study investigators tried to use to limit confounding.
2 3 4 5 6 7	MS. MILLER: Objection. THE WITNESS: Can you can you ask that again? Because I didn't understand that was a question. QUESTIONS BY MR. TISI: Q. Let me ask you directly.	2 3 4 5 6 7	A. And it depends on the how the study is put together. It depends on what the study investigators used to tried to limit bias and what the study investigators tried to use to limit confounding. If a poorly designed
2 3 4 5 6 7 8	MS. MILLER: Objection. THE WITNESS: Can you can you ask that again? Because I didn't understand that was a question. QUESTIONS BY MR. TISI: Q. Let me ask you directly. In terms of reliability, do you	2 3 4 5 6 7 8	A. And it depends on the how the study is put together. It depends on what the study investigators used to tried to limit bias and what the study investigators tried to use to limit confounding. If a poorly designed hospital-based study may not be as good as a
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	Page 242		Page 244
1	MR. TISI: Nope.	1	cases and controls are patients, for
2	MS. MILLER: I do.	2	example, in hospitalized patients."
3	MR. TISI: Good for you.	3	QUESTIONS BY MR. TISI:
4	MS. MILLER: May I say that to	4	Q. Is there a citation to it?
5	cut to the chase?	5	A. There is, Schultz and Grimes.
6	MR. TISI: No, I don't want	6	Q. Okay.
7	MS. MILLER: You want him to	7	A. "Where the degree of thinking
8		8	
9	read through every page? Okay. MR. TISI: I don't want him to	9	about a possible exposure outcome is likely to be at similar levels."
10		10	
	read every page, but I don't want you		Q. Okay. All right. So going
11	to coach your witness. Because I	11	back to the hierarchy of evidence concept
12	noticed before that you were circling	12	because you mentioned that several times
13	things while he was looking at it, so	13	throughout your report, true?
14	I don't want to do it anymore.	14	A. You've asked me several times
15	MR. LOCKE: Objection.	15	about it, and I have talked about the
16	MS. SHARKO: That's really	16	hierarchy evidence in my report.
17	inappropriate	17	Q. Okay. Well, let's talk about
18	MR. TISI: I understand it's	18	the places where you do talk about it.
19	MS. SHARKO: Mr. Tisi, and	19	You mentioned it in your
20	it's not true.	20	conclusion. We talked about that.
21	MR. TISI: The video will	21	Can you go to page 27 of your
22	demonstrate that it is true.	22	report?
23	MR. LOCKE: It's false. She	23	A. Sure.
24	was circling something on the left	24	Q. At the very bottom of the page
25	side away from the witness.	25	it says, "While cohort studies have their own
	Page 243		Page 245
1	MR. TISI: Okay.	1	limitations like any other study design, the
2	MS. MILLER: To show to Susan.	2	focused criticism of cohort studies by
3	MS. SHARKO: With her computer	3	plaintiffs' epidemiologists, even though they
1		3	planitins epideiniologists, even though they
4	open between Ms. Miller and the	4	generally are considered more reliable than
4 5	open between Ms. Miller and the witness.		
	witness.	4	generally are considered more reliable than
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	Page 246		Page 248
1	considered more reliable than	1	generally accepted that they are more
2	case-control studies suggests a biased	2	reliable than case-control studies," meaning
3	approach to their analysis."	3	cohort studies, true?
4	QUESTIONS BY MR. TISI:	4	MR. LOCKE: Objection.
5	Q. Do you believe that they did?	5	THE WITNESS: Can you state
6	MS. MILLER: Objection.	6	that as a question?
7	THE WITNESS: I'm just going to	7	QUESTIONS BY MR. TISI:
8	read what I said.	8	Q. Yes.
9	MS. MILLER: Asked and	9	Do you state that cohort
10	answered.	10	studies here are more reliable than
11	QUESTIONS BY MR. TISI:	11	case-control studies?
12	Q. I understand you read what you	12	MS. MILLER: Objection.
13	said. This is my opportunity to ask you	13	THE WITNESS: So it depends.
14	questions about what you wrote. I can read	14	In general, cohort studies, as I
15	what you said, too.	15	talked about earlier, when performed
16	Okay. So my question to you	16	appropriate when designed
17	is: Do you believe that they used a biased	17	appropriately, when performed
18	approach	18	appropriately, when analyzed
19	MS. MILLER: Objection.	19	appropriately, do fall higher up on
20	QUESTIONS BY MR. TISI:	20	the hierarchy of evidence when
21	Q to their analysis?	21	compared to case-control studies.
22	A. What I'm saying is that	22	QUESTIONS BY MR. TISI:
23	Q. I'm not asking what you said.	23	Q. On page 35, you have a whole
24	I'm asking what your opinion is now, Doctor.	24	section about the disregard of hierarchy of
25	Is your opinion, if I close	25	evidence.
	Page 247		Page 249
1	this book and we don't read what you said,	1	Page 249 Do you see that?
1 2		1 2	
	this book and we don't read what you said,		Do you see that?
2	this book and we don't read what you said, I'm asking you, do you think that they used a biased approach in looking at the case-control studies and the cohort studies?	2	Do you see that? A. I do see the disregard for
2	this book and we don't read what you said, I'm asking you, do you think that they used a biased approach in looking at the	2 3	Do you see that? A. I do see the disregard for hierarchy of evidence.
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2 3 4 5 6	this book and we don't read what you said, I'm asking you, do you think that they used a biased approach in looking at the case-control studies and the cohort studies? MS. MILLER: He was in the middle of answering, and you	2 3 4 5 6	Do you see that? A. I do see the disregard for hierarchy of evidence. Q. And you're referring, again, to the methodologic flaw of plaintiffs' experts, which is the main Section 8 above, correct?
2 3 4 5 6 7	this book and we don't read what you said, I'm asking you, do you think that they used a biased approach in looking at the case-control studies and the cohort studies? MS. MILLER: He was in the middle of answering, and you interrupted him to ask the question	2 3 4 5 6 7	Do you see that? A. I do see the disregard for hierarchy of evidence. Q. And you're referring, again, to the methodologic flaw of plaintiffs' experts, which is the main Section 8 above, correct? A. Can you show me what you're
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	this book and we don't read what you said, I'm asking you, do you think that they used a biased approach in looking at the case-control studies and the cohort studies? MS. MILLER: He was in the middle of answering, and you interrupted him to ask the question MR. TISI: No, he was about to read me what this is what I said. QUESTIONS BY MR. TISI: Q. I'm asking you what your opinion is. A. And my opinion is what I said. Q. Okay. A. And I'll say again. Q. No, you don't need read it again. If your opinion is limited to what it says here, then that's fine. Do you believe do you have any reason to know that they used well, strike that. Strike that. We'll let it	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Do you see that? A. I do see the disregard for hierarchy of evidence. Q. And you're referring, again, to the methodologic flaw of plaintiffs' experts, which is the main Section 8 above, correct? A. Can you show me what you're referring to? Q. Yeah. Roman Numeral VIII is Methodologic Flaws of Plaintiffs' Experts' Epidemiology-Based Opinions. That's the title of this section? A. That's correct. Q. And the first criticism you have here is disregard for hierarchy of evidence, correct? A. I see that, disregard for hierarchy of evidence. Q. Are you saying that the plaintiffs' experts disregarded the hierarchy

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	Page 250		Page 252
1 2	case-control studies, they're just not equal. I mean, cohort studies are	1 2	National Health Medical Research Council is? MR. LOCKE: Objection.
3	following subjects	3 4 5 6 7 8 9	THE WITNESS: I do not know who
4	QUESTIONS BY MR. TISI:	4	the National Health and Medical
5	Q. Wasn't what I asked. So,	5	Research Council are.
6	Doctor, sorry. I wasn't asking your opinion	6	QUESTIONS BY MR. TISI:
7	about case control and cohort.	7	Q. Did you get this document from
8	I'm asking you: Did the	8	the defense lawyers or did you find it on
9	plaintiffs' experts not what your views	9	your own?
10	are. Did, in your opinion, plaintiffs'	10	A. I found this myself.
11	experts disregard the hierarchy of evidence?	11	Q. Okay. Without but you don't
12	MR. LOCKE: Objection.	12	know who these people are?
13	MS. MILLER: Objection.	13	A. I don't know who a lot of
14	THE WITNESS: So and I'll	14	people are that publish things.
15	say that in general the hierarchy of	15	Q. Well, you don't know what this
16	evidence does place cohort studies	16	organization is, do you?
17	above the case-control studies. And	17	A. No, I don't.
18	to treat those studies equally in	18	Q. Okay. So but you say
19	looking at the body of evidence would	19	here the only thing you cite for that is
20	be disregarding the hierarchy of	20	this Australian document.
21	evidence.	21	Can you tell me why you didn't
22	QUESTIONS BY MR. TISI:	22	go to any of the textbooks that you use at
23 24	Q. Okay. And you say, "The	23	Hopkins to cite this well-established
24 25	hierarchy of evidence is well-established in the scientific community." And that's where	24 25	principle? A. No.
	the scientific community. This that's where		71. 110.
	Page 251		Page 253
1	you cite the National Health and Research	1	MR. LOCKE: Objection.
2	you cite the National Health and Research Council.	1 2	MR. LOCKE: Objection. THE WITNESS: I mean, I could
2 3	you cite the National Health and Research Council. And that's that Australian	1 2 3	MR. LOCKE: Objection. THE WITNESS: I mean, I could have gone to textbooks, but I didn't.
2 3 4	you cite the National Health and Research Council. And that's that Australian white paper that we talked about before,	1 2 3 4	MR. LOCKE: Objection. THE WITNESS: I mean, I could have gone to textbooks, but I didn't. QUESTIONS BY MR. TISI:
2 3 4 5	you cite the National Health and Research Council. And that's that Australian white paper that we talked about before, right?	1 2 3 4 5	MR. LOCKE: Objection. THE WITNESS: I mean, I could have gone to textbooks, but I didn't. QUESTIONS BY MR. TISI: Q. Well, we will.
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2 3 4 5 6 7	you cite the National Health and Research Council. And that's that Australian white paper that we talked about before, right? MS. MILLER: Objection. THE WITNESS: I'd have to look	1 2 3 4 5 6 7	MR. LOCKE: Objection. THE WITNESS: I mean, I could have gone to textbooks, but I didn't. QUESTIONS BY MR. TISI: Q. Well, we will. A. I looked things up. Q. You call this a fundamental
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	you cite the National Health and Research Council. And that's that Australian white paper that we talked about before, right? MS. MILLER: Objection. THE WITNESS: I'd have to look at it. (Merlo Exhibit 26 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. We'll find it. I'll attach this as Exhibit Number 26. This is the paper to which you were referring. A. Yeah, I don't have this memorized, the entirety. Q. I'm not asking you about it. I'm just asking if this is the document you referenced to in your footnote. A. This looks like it. Q. Okay. Before when I asked you about Health Canada, you said you didn't even	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. LOCKE: Objection. THE WITNESS: I mean, I could have gone to textbooks, but I didn't. QUESTIONS BY MR. TISI: Q. Well, we will. A. I looked things up. Q. You call this a fundamental principle of epidemiology, if you go to page 46. First sentence, second paragraph of your conclusions. A. The first sentence of the second paragraph? Q. Uh-huh. A. And what was the question? Q. You call it a fundamental principle of epidemiology, right? A. The first sentence of the second paragraph says, "The methodologies used by plaintiffs' experts ignore fundamental principles of epidemiology." Q. In particular, plaintiffs' experts ignore the hierarchy of evidence. A. Yes.
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	Page 254		Page 256
1	A. Yes.	1	A. So I wasn't I wasn't
	Q. Okay. So in your whole report,	2	involved in any of the design of the cohort
3	the only thing you cited was this Australian	3	studies, but one of the beauties of a cohort
4	document, which we've marked as Exhibit	4	study is you actually don't need that.
5	Number 26, on this fundamental principle,	5	Q. Okay.
6	right?	6	A. And what you do is you follow
2 3 4 5 6 7 8 9	MR. LOCKE: Objection.	7	patients over time, and sometimes things come
8	MS. MILLER: Objection.	8	up. And you might add a questionnaire in and
9	QUESTIONS BY MR. TISI:	9	then follow because you have a large group of
10	Q. Because I don't see any other	10	people that you're following over time. You
11	citation in any other place other than this	11	have a time zero with some measurement, and
12	Australian document from the organization you	12	then an outcome that develops. And that's
13	know who they are.	13	that's the purpose of a cohort study
14	A. That's the citation I used. I	14	Q. How long
15	teach about this in class. I've been taught	15	A that you don't need to have
16	about it in class.	16	one hypothesis.
17	Q. Okay.	17	Q. How large would a study have
18	A. You're welcome to take my class	18	you done any power calculations to determine
19	and see the slides.	19	how large a study would have to be in order
20	Q. I think I'm gonna.	20	to accurately collect information that would
21	Putting aside your concern	21	be useful in determining where there's
22	about how the experts weighed the talc	22	association?
23	studies, you believe that the cohort design	23	MR. LOCKE: Objection.
24	is the best for measuring ovarian cancer?	24	THE WITNESS: I don't
25	MS. MILLER: Objection.	25	understand your question. It doesn't
	Page 255		Page 257
1	THE WITNESS: Again, it	1	make sense.
2			
	depends. It depends on the how the	2	QUESTIONS BY MR. TISI:
3	study is set up. It depends on	3	QUESTIONS BY MR. TISI: Q. How large? How large would a
3 4	study is set up. It depends on what it depends on how long someone	3 4	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be?
3 4 5	study is set up. It depends on what it depends on how long someone is followed. It depends on the study	3 4 5	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be? How many patients would have to
3 4 5 6	study is set up. It depends on what it depends on how long someone is followed. It depends on the study population being looked at. It	3 4 5 6	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be? How many patients would have to be enrolled in a cohort study in order to get
3 4 5 6 7	study is set up. It depends on what it depends on how long someone is followed. It depends on the study population being looked at. It depends on what potential bias was	3 4 5 6 7	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be? How many patients would have to be enrolled in a cohort study in order to get good information about whether or not talc is
3 4 5 6 7 8	study is set up. It depends on what it depends on how long someone is followed. It depends on the study population being looked at. It depends on what potential bias was tried to it depends on the	3 4 5 6 7 8	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be? How many patients would have to be enrolled in a cohort study in order to get good information about whether or not talc is associated with ovarian cancer?
3 4 5 6 7 8 9	study is set up. It depends on what it depends on how long someone is followed. It depends on the study population being looked at. It depends on what potential bias was tried to it depends on the investigators planning to try to limit	3 4 5 6 7 8 9	QUESTIONS BY MR. TISI: Q. How large? How large would a study have to be? How many patients would have to be enrolled in a cohort study in order to get good information about whether or not talc is associated with ovarian cancer? MR. LOCKE: Objection.
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65 (Pages 254 to 257)

	Page 258		Page 260
1	have to be?	1	QUESTIONS BY MR. TISI:
2	A. It depends. It depends on	2	Q. I'm not saying anything.
3	the it depends on the population. It	3	What page are you looking at,
4	depends on what the incidence of disease in	4	Doctor?
5	that population is.	5	A. Well, this might not be 38.
6	Q. And how long how long do you	6	So 38, page 38, paragraph 1, where it says,
7	think it would have to be for a cohort study	7	"She relies on commentary by Narod, who
8	to detect ovarian cancer in women?	8	states that the lack of significant overall
9	MS. MILLER: Objection.	9	association between ever talc use and ovarian
10	THE WITNESS: Well, then I'm	10	cancer in the cohort studies may be due to
11	going to have to say it depends.	11	the fact that despite the large size of the
12	Because in all women, that will	12	cohorts, the studies were not adequately
13	you'd need a very different number	13	powered to detect a relative risk of
14	than in looking at, say, women who are	14	approximately 1.2."
15	55 to 65, because the incidence of	15	Q. Right.
16	disease is very different among	16	A. "But this commentary rests on
17	different age populations.	17	sample size calculations with certain
18	QUESTIONS BY MR. TISI:	18	assumptions regarding the risk of ovarian
19	Q. Okay. So in women 55 to 65,	19	cancer, including the same incidence rate
20	did you independently assess how large a	20	issue that undermines Dr. McTiernan's
21	study would have to be?	21	critique. When the actual incidence rate of
22	MS. MILLER: Objection.	22	ovarian cancer in the cohort studies is taken
23	THE WITNESS: I looked at power	23	into account, it decreases the study sample
24	and sample size calculation under	24	size needed to the sample size reported in
25	various assumptions, and those	25	the relevant cohort studies."
	Page 259		Page 261
1	assumptions utilized the incidence of	1	Q. I understood. I read that.
2	disease and the time to follow someone	2	Where is your calculation for
3	with varying times and varying	3	that?
4	incidence of disease.	4	Did you it says when the
5	QUESTIONS BY MR. TISI:	5	last sentence says, "When the actual
6	Q. So how large would a study have	6	incidence rates of ovarian cancer in the
7	to be in women age 50 to 55 to detect an	7	cohort studies is taken into account, it
8	association between talc and ovarian cancer?	8	decreases the study sample size."
9	A. So I used 55 to 65 as an	9	You did the calculation to make
10	example just talking right here. I don't	10	that conclusion, and I don't see it in your
11	specifically remember right now the incidence	10	that conclusion, and I don't see it in your report.
11 12	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60.	1	report. Can you tell me where it is?
11	specifically remember right now the incidence	11	report.
11 12	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60. I know that there are ranges, and those ranges are available on the	11 12	report. Can you tell me where it is?
11 12 13 14 15	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60. I know that there are ranges, and those ranges are available on the Internet to look at incidence of disease	11 12 13	report. Can you tell me where it is? A. I did it on a computer, and it
11 12 13 14 15	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60. I know that there are ranges, and those ranges are available on the Internet to look at incidence of disease based on age, and I used some of those ranges	11 12 13 14 15 16	report. Can you tell me where it is? A. I did it on a computer, and it gave me a sample size that was similar to what was reported in the relative cohort studies when you use an incidence of ovarian
11 12 13 14 15 16	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60. I know that there are ranges, and those ranges are available on the Internet to look at incidence of disease based on age, and I used some of those ranges and some of those incidences.	11 12 13 14 15 16 17	report. Can you tell me where it is? A. I did it on a computer, and it gave me a sample size that was similar to what was reported in the relative cohort studies when you use an incidence of ovarian cancer that's similar to the incidence rates
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11 12 13 14 15 16 17 18 19 20 21	specifically remember right now the incidence of ovarian cancer in someone who is 55 to 60. I know that there are ranges, and those ranges are available on the Internet to look at incidence of disease based on age, and I used some of those ranges and some of those incidences. Q. Did you do calculations? A. I did calculations. Q. Where are they? A. They're in my report. Q. Where are they?	11 12 13 14 15 16 17 18 19 20 21 22	report. Can you tell me where it is? A. I did it on a computer, and it gave me a sample size that was similar to what was reported in the relative cohort studies when you use an incidence of ovarian cancer that's similar to the incidence rates of the population that was being studied. Q. You did it on a computer? It's not in your report. MS. MILLER: Yes, it is. QUESTIONS BY MR. TISI:

66 (Pages 258 to 261)

1 MS. MILLER: Well, we can sit 2 and he can look for it, or I can tell 3 you where it is. 4 MR. TISI: It's funny how that 5 happens. When I ask him about a 5 specific sentence, you want him to 6 read the whole report. 8 MS. MILLER: No, that's not 10 owhat I was saying. I said if you want 11 him to read the whole report, you can. 12 I also know where it is. 13 MR. TISI: No, that's it 14 depends on the question. 15 MS. SHARKO: Well, being nice 16 doesn't work, unfortunately. 17 MS. MILLER: You don't fine. 18 MS. MILLER: Oo ahead. 21 MS. MILLER: Objection. 22 MR. TISI: You really want 25 the course of these depositions has Page 263 Page 265 A. — if, in fact, there is no difference in folks who haven't been exposed or	
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that sample size would be adequate. 14 Q if they exist together,	
15 OHESTIONS BY MR TISI: 15 right?	
Q. Okay. Where is that?	
17 A. It's at page 37. 17 THE WITNESS: I don't	
18 Q. Which paragraph? 18 understand the question. You have t	0
19 A. Third paragraph. 19 ask it again.	
20 Q. Okay. 20 QUESTIONS BY MR. TISI:	
A. And then halfway down that 21 Q. Well, let's look at the Gordis	
paragraph it says, "Specifically using the 22 textbook again. Exhibit Number 23.	
Berge study meta-analysis of cohort studies, 23 Can you look at Exhibit 23	
which concluded that combined cohort studies 24 again, Doctor?	
25 yielded no risk of ovarian cancer when 25 MS. MILLER: Is that the	

67 (Pages 262 to 265)

	Page 266		Page 268
1	Chapter 14?	1	is?
2	MR. TISI: Yeah.	2	A. No.
3	QUESTIONS BY MR. TISI:	3	Q. You don't know who he is?
4	Q. Can you go to page 256? You	4	A. I have no idea.
5	use it as an example 255, excuse me. Oh,	5	Q. Okay. Do you know he's written
6	I'm sorry. 257, please.	6	a textbook on epidemiology?
7	He uses as an exam and feel	7	A. I don't know his textbook, no.
8	free to look at if you wish. He uses an	8	(Merlo Exhibit 27 marked for
9	example, the process for using evidence in	9	identification.)
10	developing recommendations, effectiveness of	10	QUESTIONS BY MR. TISI:
11	prenatal interventions. He's giving a	11	Q. Okay. So I'm going to show you
12	causation approach here.	12	and ask whether you agree with it. It's a
13	The top here is categorizing	13	textbook on case-control studies.
14	the evidence by quality and source, and	14	Chapter 8. Did you read by
15	stage 2 is using the guidelines of evidence	15	the way, did you read Dr. Ballman's
16	of causal relationship, and those would be	16	testimony?
17	the Bradford Hill criteria.	17	A. I did.
18	Do you see that?	18	Q. You did.
19	A. I see this table and I see a	19	So you saw a discussion of
20	something that says, stage 1, categorizing	20	Dr. Rothman, right?
21	the evidence by the quality of its source.	21	A. Yes, but I don't know who
22	I see stage 2, guidelines with	22	Dr. Rothman is.
23	some what Dr. Gordis calls criteria, some	23	Q. Okay. Spent a lot of time
24	of which are some Bradford Hill	24	talking about Dr. Rothman.
25	considerations.	25	Let me ask you this
			Let me don you time
	Page 267		Page 269
1	Q. Okay. Now, let's look at the	1	MS. MILLER: I'm sorry,
2	quality of evidence, because that's what	2	Mr. Tisi, can we have copies as well?
3	we're talking about here, right?	3	MR. TISI: Oh, I'm sorry. That
4	Number 1 is trials, and we	4	was an error. Here you go.
_		1	
5	talked about those before. Those would be	5	MS. MILLER: Thank you so much.
6	kind of the human experimental trials, the	1	MS. MILLER: Thank you so much. MR. TISI: You're so welcome.
		5	MS. MILLER: Thank you so much.
6	kind of the human experimental trials, the placebo-control kind of trials, right? A. Usually trials are either	5 6	MS. MILLER: Thank you so much. MR. TISI: You're so welcome. QUESTIONS BY MR. TISI: Q. Second sentence in the
6 7	kind of the human experimental trials, the placebo-control kind of trials, right? A. Usually trials are either randomized, double-blinded, placebo-control	5 6 7	MS. MILLER: Thank you so much. MR. TISI: You're so welcome. QUESTIONS BY MR. TISI: Q. Second sentence in the textbook second paragraph. It's on
6 7 8 9 10	kind of the human experimental trials, the placebo-control kind of trials, right? A. Usually trials are either randomized, double-blinded, placebo-control trials, or randomized, not blinded, or	5 6 7 8 9	MS. MILLER: Thank you so much. MR. TISI: You're so welcome. QUESTIONS BY MR. TISI: Q. Second sentence in the textbook second paragraph. It's on this is on this chapter is entitled
6 7 8 9 10 11	kind of the human experimental trials, the placebo-control kind of trials, right? A. Usually trials are either randomized, double-blinded, placebo-control trials, or randomized, not blinded, or nonrandomized but clinical trials where an	5 6 7 8 9 10 11	MS. MILLER: Thank you so much. MR. TISI: You're so welcome. QUESTIONS BY MR. TISI: Q. Second sentence in the textbook second paragraph. It's on this is on this chapter is entitled "Case-Control Studies," right?
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6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	kind of the human experimental trials, the placebo-control kind of trials, right? A. Usually trials are either randomized, double-blinded, placebo-control trials, or randomized, not blinded, or nonrandomized but clinical trials where an intervention is done. Q. Okay. And the second category he has here is cohort or case-control studies. Do you see that? A. I do see that line that says "cohort or case-control studies." Q. He doesn't say cohort and then case-control studies, does he? A. He doesn't. Q. Okay. A. They're both observational	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MS. MILLER: Thank you so much. MR. TISI: You're so welcome. QUESTIONS BY MR. TISI: Q. Second sentence in the textbook second paragraph. It's on this is on this chapter is entitled "Case-Control Studies," right? A. This chapter, Chapter 8, called "Case-Control Studies." Q. The second paragraph begins with the sentence, "Conventional wisdom about case-control studies is that they do not yield estimates of effect that are valid measures obtained from cohort studies. This thinking may reflect common misunderstandings in the conceptualizing of case-control studies, which will be clarified later." Do you see that? A. I do see that.

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	Page 270		Page 272
1	THE WITNESS: This is a very,	1	that, Doctor? I mean, honestly, I'm pulling
2	very, very vague statement.	2	up book chapters, published articles. You
3	QUESTIONS BY MR. TISI:	3	pulled up a white paper from Australia.
4	Q. Okay.	4	How do I check and ask you,
5	A. And I'm going to have to say it	5	other than your say-so, as to what the
6	depends. It depends on who's thinking about	6	general acceptance is in the in the
7	it. It depends on the quality of the	7	epidemiologic community, other than you just
8	case-control study. It depends on the	8	saying it?
9	quality of the cohort study. It depends on	9	MS. MILLER: Objection.
10	so many things that I can't even agree nor	10	MR. LOCKE: Objection.
11	disagree with it.	11	THE WITNESS: You can take a
12	(Merlo Exhibit 28 marked for	12	class in epidemiology.
13	identification.)	13	QUESTIONS BY MR. TISI:
14	QUESTIONS BY MR. TISI:	14	Q. I don't think I'm going to take
15	Q. Okay. Let me show you another	15	your class.
16	article by Dr. Rothman, Exhibit Number 28.	16	A. Well, I didn't say my class.
17	This is a review article	17	You can take any class.
18	entitled "Six Persistent Misconceptions."	18	Q. I'm reading the textbooks, and
19	Do you see that?	19	they don't say what you say.
20	A. I do.	20	MS. MILLER: Objection.
21	Q. Have you seen this before?	21	MR. LOCKE: Objection.
22	A. Yes.	22	(Merlo Exhibit 29 marked for
23	Q. Okay. Can you read	23	identification.)
24	misconception number 1?	24	QUESTIONS BY MR. TISI:
25	MS. MILLER: Objection.	25	Q. I'm going to show you another
-			
	Page 271		Page 273
1	THE WITNESS: Misconception 1,	1	one. This is Dr. Rothman who actually was,
2	"There is a hierarchy of study	2	unlike you, consulted to look at the talc
3	1 1 1 1 1 1 1 1 1 1		
J	designs. Randomized trials provide	3	question back in 2000.
4	the greatest validity, followed by	3 4	question back in 2000. Almost 20 years ago, right?
4 5	the greatest validity, followed by cohort studies, with case-control		question back in 2000. Almost 20 years ago, right? I'm going to show you that
4 5 6	the greatest validity, followed by cohort studies, with case-control studies being least reliable."	4 5 6	question back in 2000. Almost 20 years ago, right? I'm going to show you that Exhibit Number 29.
4 5 6 7	the greatest validity, followed by cohort studies, with case-control studies being least reliable." QUESTIONS BY MR. TISI:	4 5	question back in 2000. Almost 20 years ago, right? I'm going to show you that Exhibit Number 29. MS. SHARKO: Can we please just
4 5 6 7 8	the greatest validity, followed by cohort studies, with case-control studies being least reliable." QUESTIONS BY MR. TISI: Q. You are studying for your	4 5 6 7 8	question back in 2000. Almost 20 years ago, right? I'm going to show you that Exhibit Number 29. MS. SHARKO: Can we please just have questions instead of accusatory
4 5 6 7 8 9	the greatest validity, followed by cohort studies, with case-control studies being least reliable." QUESTIONS BY MR. TISI: Q. You are studying for your support of this general this general	4 5 6 7 8 9	question back in 2000. Almost 20 years ago, right? I'm going to show you that Exhibit Number 29. MS. SHARKO: Can we please just have questions instead of accusatory speeches?
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	D 0F4		2 000
	Page 274		Page 276
1	context, this is November of 2000, this date	1	design, talked about the methodology used in
2	of this report, correct?	2	the studies and the conclusions reached in
3	A. That's correct.	3	the study, right? They went through every
4	Q. Okay. This is some this is	4	one of them.
5	like halfway, if that, in the timeline of all	5	MS. MILLER: Objection.
6	the studies that have been conducted in this	6	MR. LOCKE: Objection.
7	case from 1982 to 2016?	7	MR. TISI: True?
8	MR. LOCKE: Objection.	8	MS. MILLER: Objection.
9	MS. MILLER: Objection.	9	THE WITNESS: You'd have to be
10	THE WITNESS: It's November	10	more specific
11	of 2000	11	QUESTIONS BY MR. TISI:
12	QUESTIONS BY MR. TISI:	12	Q. Well, you reviewed them and you
13	Q. Right.	13	made the criticisms.
14	A and that's when it was	14	So can you tell me one expert
15	published.	15	who both plaintiffs' experts who did not
16	Q. So what he's saying here, and	16	look at the study design for the
17	I'm going to read it for the record, not all	17	case-controls and cohorts, who did not look
18	the study "nearly all the studies were	18	at the methodology and who did not look at
19	case-control studies. It is commonly	19	the results?
20	believed that the validity of case-control	20	MS. MILLER: Objection.
21	studies is worse than cohort studies, but	21	MR. LOCKE: Objection.
22	this view is mistaken. The validity of the	22	THE WITNESS: You'd have to be
23	study depends on the specifics of the study	23	more specific. If we look at the
24	design, the nature of the data and the nature	24	QUESTIONS BY MR. TISI:
25	of the hypothesis that the study addresses."	25	Q. No, you'll have to be more
	Page 275		Page 277
1	Do you see that?	1	specific because you made some bald
2	A. I do see that.	2	accusations here, and I really need you to be
3	Q. Do you agree with it or not?	3	specific. I need you to tell me: Did
4	A. Well, I think I said earlier,	4	plaintiffs' experts did plaintiffs'
5	and I've said it in my report, that the	_	4 1114 1 41 1 1
6	and I ve said it in my report, that the	5	experts did they do or not do an analysis
U	hierarchy of evidence is in general. And I	5 6	experts did they do or not do an analysis of each study?
7			of each study? MS. MILLER: Objection.
	hierarchy of evidence is in general. And I	6	of each study?
7	hierarchy of evidence is in general. And I said that a poorly designed or a poorly	6 7	of each study? MS. MILLER: Objection.
7 8	hierarchy of evidence is in general. And I said that a poorly designed or a poorly executed or a poorly analyzed cohort study	6 7 8	of each study? MS. MILLER: Objection. MR. LOCKE: Objection.
7 8 9	hierarchy of evidence is in general. And I said that a poorly designed or a poorly executed or a poorly analyzed cohort study may be less evident than a very, very	6 7 8 9	of each study? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: There were
7 8 9 10	hierarchy of evidence is in general. And I said that a poorly designed or a poorly executed or a poorly analyzed cohort study may be less evident than a very, very well-designed case control. Q. So when I'm sorry. A. And the same thing for	6 7 8 9 10 11 12	of each study? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: There were summaries of studies, but we'd have to
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	Page 278		Page 280
1	Q. Okay. All four studies	1	2:00 p.m. We're going off the record.
2	MS. MILLER: Do you want a	2	(Off the record at 2:00 p.m.)
3	break?	3	VIDEOGRAPHER: Okay. The time
4	MR. TISI: If he can tell me	4	is 2:11 p.m., and we're back on the
5	if he wants a break.	5	record.
6	THE WITNESS: I'm okay.	6	QUESTIONS BY MR. TISI:
7	MR. TISI: He just said he's	7	Q. Was the talc/ovarian cancer
8	okay.	8	hypothesis prespecified in any of the cohort
9	MS. MILLER: Do we have a new	9	studies?
10	rule in depositions where lawyers	10	MS. MILLER: Objection.
11	can't ask for a break?	11	THE WITNESS: I don't know.
12	MR. TISI: If you want to ask	12	The cohort studies involving the
13	for a break, that's fine. If he's	13	Nurses' Health Study, for instance,
14	you asked him whether he wants a	14	added a questionnaire in 1982.
15	break.	15	And so if one added a
16	MS. MILLER: This is just	16	questionnaire in 1982 asking about
17	getting surreal, Susan.	17	talc, at that point in the cohort
18	MR. TISI: It is totally	18	study there may have been a hypothesis
19	getting surreal. You asked him	19	about that. That's why they added
20	whether he wants a break.	20	that that's why one might think
21	Can you read that back? Can	21	that they added a questionnaire.
22	you read that back?	22	QUESTIONS BY MR. TISI:
23	MS. SHARKO: I thought are	23	Q. You don't know that because the
24	we really going to have this kind of	24	study doesn't say that, does it?
25	meltdown over a break, Mr. Tisi?	25	MS. MILLER: Objection.
	,		
	Page 279		Page 281
1	MR. TISI: I am totally okay	1	THE WITNESS: I'd have to
2	with her taking a break if she says "I	2	review the study back to look at
3	would like to take a break." But	3	it. I don't have it memorized.
4	don't ask the witness whether he wants	4	QUESTIONS BY MR. TISI:
5	to take a break, because that suggests	5	Q. How many times in each of these
6	that he should take a break.	6	
7			cohort studies what is the concept of
,	MS. SHARKO: Seriously?	7	cohort studies what is the concept of exposure classification?
8		7 8	
	MS. SHARKO: Seriously? MR. TISI: That's coaching. MS. SHARKO: That's not		exposure classification?
8	MR. TISI: That's coaching.	8	exposure classification? A. Can you be more specific?
8 9	MR. TISI: That's coaching. MS. SHARKO: That's not	8 9	exposure classification? A. Can you be more specific? Q. Yeah.
8 9 10	MR. TISI: That's coaching. MS. SHARKO: That's not coaching, Mr. Tisi.	8 9 10	exposure classification? A. Can you be more specific? Q. Yeah. What is exposure mis is that
8 9 10 11	MR. TISI: That's coaching. MS. SHARKO: That's not coaching, Mr. Tisi. MS. MILLER: Was there a	8 9 10 11	exposure classification? A. Can you be more specific? Q. Yeah. What is exposure mis is that a term of art in epidemiology?
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8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. TISI: That's coaching. MS. SHARKO: That's not coaching, Mr. Tisi. MS. MILLER: Was there a question? Was there a question pending? MR. TISI: It's totally coaching. Did you need to take a break, or do you want to go forward? Do you want to take a break? MS. MILLER: I would like to take a break. MS. SHARKO: I want to take a break. MR. TISI: Perfect. All you	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	exposure classification? A. Can you be more specific? Q. Yeah. What is exposure mis is that a term of art in epidemiology? A. Well, misclassification is a term. And you can have misclassification in both exposure and both in outcome if Q. I'm asking you about exposure misclassification. Actually, I'm using the term that Dr. Rothman used. By the way, you know, Doctor, the journal American Epidemiologists? A. I don't. Q. Okay. Do you know have you
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	Page 282		Page 284
1	Dr. Rothman and his colleagues talk about	1	think you said it's the one that biases
2	exposure misclassification in Exhibit	2	toward the null is that a problem with
3	Number 29.	3	cohort studies?
4	Do you know what that concept	4	A. Nondifferential
5	is?	5	Q. Nondifferential?
6	A. And what page is that on again?	6	A misclassification
7	Q. I'm just asking you what it is.	7	Q. Yes.
8	I mean, it's in Exhibit 29 he uses the term.	8	A biases toward the null.
9	Do you know what it is?	9	Q. Right.
10	A. Well, you're referring to this.	10	Is that a recognized concern
11	I haven't read this paragraph yet, but I do	11	with cohort studies?
12	know what exposure misclassification is.	12	A. So it depends. It depends if
13	Q. Then that's what I want. What	13	there's some reason to believe that those who
14	is exposure misclassification?	14	are exposed actually are unexposed, and those
15	A. Misclassification involving an	15	that are unexposed are being labeled as
16	exposure is when either a study subject is	16	exposed.
17	classified as being exposed when they're not	17	Q. And in the cohort studies on
18	exposed or being classified as not exposed	18	talc, would it isn't it generally true
19	when they're exposed.	19	across the cohort studies that women were
20	Q. And exposure misclassification,	20	asked about that talc exposure only once?
21	generally speaking, will bias the results	21	A. I would have to review the
22	towards the null, correct?	22	articles again. I don't know that I
23	A. Not necessarily.	23	specifically have that memorized.
24	Q. I didn't say necessarily. I	24	Q. Okay. If that were true, would
25	said generally speaking.	25	there be a danger of exposure
1	Wouldn't that be the case?	1	misclassification?
2	A. No, absolutely not.	2	A. Again, I think it depends. It
3	Q. Okay.	3	depends on it depends on the
4	A. And I'll tell you why.	4	questionnaire. It depends on the time
5	Q. Please.	5	between questionnaire and measurement of
6	A. Because there are two different	6	outcome. It depends on whether or not
7	types of misclassification. One is	7	there's any aspect of asking about potential
8	traditionally referred to as differential	8	exposure in the past, and it depends a lot
9	misclassification, and one is traditionally	9	it depends on a lot of things.
10 11	referred to as nondifferential	10 11	Q. Did you review the Taher draft
12	misclassification.	12	article meta-analysis?
	Nondifferential	13	A. I did review Taher.
13 14	misclassification can bias the study results	13	Q. Do you know whether or not
14	to the null. Differential misclassification,	15	exposure misclassification was identified as
15 16	such as that occurs with recall bias, can	16	a shortcoming in the cohort studies dealing
16 17	actually bias the result away from the	17	with tale? A. I would have to look at the
	null	18	
7 0	Q. Okay.	19	draft and see what you're referring to.
18	A and airra reas an arraminflat - 1	1 19	Q. No, I'm not asking about the
19	A and give you an overinflated	I	
19 20	estimate of risk.	20	draft. I'm asking in the cohort studies
19 20 21	estimate of risk. Q. Is recall bias an aspect of	20 21	draft. I'm asking in the cohort studies themselves.
19 20 21 22	estimate of risk. Q. Is recall bias an aspect of exposure misclassification; do you think?	20 21 22	draft. I'm asking in the cohort studies themselves. A. I'm sorry?
19 20 21 22 23	estimate of risk. Q. Is recall bias an aspect of exposure misclassification; do you think? A. Absolutely.	20 21 22 23	draft. I'm asking in the cohort studies themselves. A. I'm sorry? Q. Didn't the authors of the
19 20 21 22 23 24	estimate of risk. Q. Is recall bias an aspect of exposure misclassification; do you think? A. Absolutely. Q. Okay. So exposure	20 21 22 23 24	draft. I'm asking in the cohort studies themselves. A. I'm sorry? Q. Didn't the authors of the cohort studies identify weaknesses in their
19 20 21 22 23	estimate of risk. Q. Is recall bias an aspect of exposure misclassification; do you think? A. Absolutely.	20 21 22 23	draft. I'm asking in the cohort studies themselves. A. I'm sorry? Q. Didn't the authors of the

72 (Pages 282 to 285)

	Page 286		Page 288
1	MS. MILLER: Objection.	1 1	MS. MILLER: Objection.
1 2 3 4 5 6 7 8	THE WITNESS: You'd have to be	1 2	MR. LOCKE: Objection.
3	more specific and see which what	3	THE WITNESS: I'm sorry?
4	study are we talking about?	3 4 5 6 7 8 9	QUESTIONS BY MR. TISI:
5	QUESTIONS BY MR. TISI:	5	Q. When's the last time you read
6	Q. Did they identify a concern	6	your report before you came in here today?
<u>7</u>	about a limitation being that there might be	7	A. I read it last night.
8	recall excuse me, might be exposure	8	Q. Okay.
9	misclassification, nondifferential	9	A. But again, there's a lot of
10	misclassification?	10	information here, and I don't have things
11	MS. MILLER: Objection.	11	memorized.
12	THE WITNESS: You'd have to	12	Q. I agree. I agree.
13	point me to the specific article that	13	So on page 24 and 25 you
14	you're referring to.	14	discuss and 26 you discuss Gates,
15	QUESTIONS BY MR. TISI:	15	Houghton, Gonzales and Gertig. I don't see
16	Q. You don't know whether or not	16	any discussion about the concern of
17	the authors in any of those studies discussed	17	nondifferential misclassification bias.
18	it?	18	A. Okay.
1920	A. There are so many articles here, so many reports, a lot of paper, I	19 20	Q. Do you agree?A. Do I agree with what?
21	don't have things memorized.	21	Q. Did you discuss nondifferential
22	Q. You	22	misclassification bias in your discussion of
23	A. If there's certain something	23	the four cohort studies?
24	that you want to ask me about the cohort	24	A. I discussed the potential for
25	studies	25	nondifferential misclassification in
	Station		monenterental inisolassification in
	Page 287		Page 289
1	Q. You put them in your report.	1	observational studies in my report.
1 2	Q. You put them in your report. Did you address did you	1 2	observational studies in my report. Q. Did you discuss them in the
1 2 3	Q. You put them in your report. Did you address did you address in your report, in your discussion of	1 2 3	observational studies in my report. Q. Did you discuss them in the context of the talc studies?
1 2 3 4	Q. You put them in your report. Did you address did you address in your report, in your discussion of the cohort studies, the concern about a	1 2 3 4	observational studies in my report. Q. Did you discuss them in the context of the talc studies? A. I didn't.
1 2 3 4 5	Q. You put them in your report. Did you address did you address in your report, in your discussion of the cohort studies, the concern about a nondifferential misclassification of	1 2 3 4 5	observational studies in my report. Q. Did you discuss them in the context of the talc studies? A. I didn't. Q. You know that that's a concern
1 2 3 4 5	Q. You put them in your report. Did you address did you address in your report, in your discussion of the cohort studies, the concern about a nondifferential misclassification of exposure?	1 2 3 4 5	observational studies in my report. Q. Did you discuss them in the context of the talc studies? A. I didn't. Q. You know that that's a concern that the plaintiffs' experts had when they
1 2 3 4 5 6 7	Q. You put them in your report. Did you address did you address in your report, in your discussion of the cohort studies, the concern about a nondifferential misclassification of exposure? A. Can you ask that again?	2 3 4 5 6 7	observational studies in my report. Q. Did you discuss them in the context of the talc studies? A. I didn't. Q. You know that that's a concern that the plaintiffs' experts had when they looked at the case excuse me, the cohort
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1	QUESTIONS BY MR. TISI:	1	QUESTIONS BY MR. TISI:
2	Q. Okay. But you don't address	2	Q. It is a general statement, and
3	that in your report?	3	I suspect that I suspect that the judge
4	MS. MILLER: Objection.	4	might look at some of the words used in here
5	THE WITNESS: I'm sorry?	5	and agree with me here.
6	QUESTIONS BY MR. TISI:	6	Pretty strong terms to say that
7	Q. You don't address that in your	7	somebody was using a conducting an
8	report with respect to the individual case	8	analysis for the purpose of litigation and
9	the individual cohort studies, do you?	9	all the things that you've said. So but
10	MR. LOCKE: Objection.	10	let's put that aside.
11	THE WITNESS: Nondifferential	11	MS. MILLER: Objection.
12	misclassification is a potential	12	QUESTIONS BY MR. TISI:
13	limitation of any observational study.	13	Q. Let's put it aside. Put it
14	QUESTIONS BY MR. TISI:	14	aside.
15	Q. Okay. I asked you whether you	15	MS. MILLER: If that's a
16	discussed it in the context of the cohort	16	speech, I'm objecting to it. It
17	studies.	17	mischaracterizes
18	MS. MILLER: Objection.	18	MR. TISI: Put it aside.
19	QUESTIONS BY MR. TISI:	19	MS. MILLER: It
20	Q. The four cohort studies on	20	mischaracterizes his report. If
21	talc, did you discuss did you even discuss	21	you're going to say it, then you're
22	that bias?	22	going to have to let me object to it.
23	I mean, you're sitting here	23	If you didn't want to say it
24	telling our telling under oath telling	24	MR. TISI: Put it aside.
25	our saying that our experts were, you	25	MS. MILLER: then you
23	our saying that our experts were, you	23	Wis. WILLER then you
	Page 291		Page 293
1	Page 291 know, litigation-driven opinions, that they	1	Page 293 shouldn't have said it.
1 2		1 2	
	know, litigation-driven opinions, that they	1	shouldn't have said it.
2	know, litigation-driven opinions, that they did all kinds of did all kinds of things	2	shouldn't have said it. MR. TISI: Put it aside. QUESTIONS BY MR. TISI: Q. You didn't discuss one of
2 3	know, litigation-driven opinions, that they did all kinds of did all kinds of things that in your view were inappropriate for the	2 3	shouldn't have said it. MR. TISI: Put it aside. QUESTIONS BY MR. TISI:
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	Page 294		Page 296
1	these memorized.	1	exposure misclassification. You identified
2	QUESTIONS BY MR. TISI:	2	it as a potential weakness generally.
3	Q. Okay. You had an opportunity	3	Did you discuss that issue in
4	to write your report. There was no page	4	connection with any one of the four cohort
5	limit on it. You could have written a	5	studies for talc?
6	thousand-page report if you'd wanted to.	6	MS. MILLER: Objection.
7	My question here is: You don't	7	THE WITNESS: Misclassification
8	really you have criticisms of plaintiffs'	8	is inherently a limitation in any
9	experts generally, but you don't really	9	study
10	address what they said about each individual	10	QUESTIONS BY MR. TISI:
11	study, do you?	11	Q. And did you
12	MR. LOCKE: Objection.	12	A case control or cohort
13	MS. MILLER: Objection.	13	studies. There are limitations inherent in
14	THE WITNESS: Again, we'd have	14	the case-control studies that are in the
15	to go through each report	15	literature. There are inherent limitations
16	QUESTIONS BY MR. TISI:	16	in the cohort studies that are out there.
17	Q. You don't address. I'm not	17	Q. Right.
18	asking what they did. I'm asking: In your	18	And just testified before that
19	report, you do not address what each expert	19	because of these things, you have to look at
20	of the plaintiff said about each study, do	20	the design of each study individually, right?
21	you?	21	A better I think you said a
22	MS. MILLER: Objection.	22	well-designed cohort study is better than a
23	MR. LOCKE: Objection.	23	well-designed case-control study, right?
24	THE WITNESS: I'm not sure what	24	And a poorly-designed cohort
25	you're asking me.	25	study may be less valuable than a
	Page 295		
1	OUESTIONS BY MR TISI:	1	well-designed case-control study right?
1 2	QUESTIONS BY MR. TISI: O. Okay. Did each of the	1 2	well-designed case-control study, right? MR. LOCKE: Objection.
1 2 3	Q. Okay. Did each of the	1 2 3	MR. LOCKE: Objection.
2	Q. Okay. Did each of the plaintiffs' experts address the issue of	2	MR. LOCKE: Objection. MS. MILLER: Objection.
2	Q. Okay. Did each of the plaintiffs' experts address the issue of recall bias? Was that issue discussed in	2	MR. LOCKE: Objection. MS. MILLER: Objection. THE WITNESS: It depends.
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75 (Pages 294 to 297)

	Page 298		Page 300
1	cohort studies, okay, did you look at	1	A. The analysis was done during
2	individually whether there was a particular	2	the follow-up period.
3	concern with these studies on	3	Q. Which was when?
4	misclassification bias?	4	How many decades after they
5	A. There's always a concern for	5	were initially asked?
6	misclassification.	6	A. Well, it depends on when the
7	Q. Understood. Theoretically	7	patient when the study subject was
8	that's true with every one of these cohort	8	enrolled.
9	studies.	9	I can say that the Gertig
10	But you know each of these	10	study, it was assessed the exposure
11	studies only asked these women in decades,	11	questionnaire was added in 1982, and they
12	most cases decades I think the Nurses'	12	were followed for 14 years on average.
13	Health Study was six and a half years but	13	Q. Right.
14	one only once about talc usage at the	14	And in 14 years, isn't it
15	beginning at or near the beginning of the	15	conceivable that somebody could have started
16	study, right?	16	using talc, or somebody that who said they
17	MR. LOCKE: Objection.	17	were using talc stopped using talc?
18	THE WITNESS: We'd have to	18	A. That's certainly possible, but
19	break that's a very generalized	19	for four studies to show the same
20	question.	20	nondifferential misclassification, that would
21	QUESTIONS BY MR. TISI:	21	be very, very unlikely.
22	Q. Where is it in your report?	22	Q. Right.
23	Where is it in your report?	23	And four studies which asked
24	A. I'm sorry.	24	asked the question once at the beginning of
25	MS. MILLER: Objection.	25	the study, right?
	MS. MEZER. Cojectom		
	Page 299		Page 301
1	QUESTIONS BY MR. TISI:	1	MS. MILLER: Objection.
2	Q. Where is your discussion in the	2	QUESTIONS BY MR. TISI:
3	report about when they were asked about their	3	Q. They all had the same flaw.
4	4-1		Q. They all had the same haw.
	talc usage in the cohort studies?	4	You had four flawed studies, didn't you?
5	A. Well, we can go through my	4 5	· ·
			You had four flawed studies, didn't you?
5	A. Well, we can go through my report if you'd like to.	5	You had four flawed studies, didn't you? MS. MILLER: Can we stick with one question at a time?
5 6	A. Well, we can go through my	5 6 7	You had four flawed studies, didn't you? MS. MILLER: Can we stick with one question at a time? QUESTIONS BY MR. TISI:
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Well, we can go through my report if you'd like to. Q. You just did that, Doctor, and you said it wasn't here. On page 24 and 25, you have a discussion, the Gertig, Gates, Houghton and Gonzalez studies. There is no discussion in here about when they were asked about the talc and how often they were asked. MR. LOCKE: Objection. THE WITNESS: I would have to look back through my report because I do know that in the Gertig study and the Gates study, the questionnaire that asked women about talc exposure was in 1982. QUESTIONS BY MR. TISI: Q. Correct.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	You had four flawed studies, didn't you? MS. MILLER: Can we stick with one question at a time? QUESTIONS BY MR. TISI: Q. You had four flawed studies with respect to misclassification bias. They all asked one time at the beginning of the study; true or not true? MR. LOCKE: Objection. MS. MILLER: Objection. THE WITNESS: The Gates and Gertig study did ask women questions about talc in 1982. That was the only time that they were asked about talc usage in those two studies. QUESTIONS BY MR. TISI: Q. What about Houghton? A. In Gertig sorry, in let

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	Page 302		Page 304
1	going to depend on when they enrolled in the	1	study, do you?
2	study in between 2003 to 2009. And they were	2	MS. MILLER: Objection. Asked
3	followed for six years afterwards.	3	and answered like ten times.
4	Q. And they were never just	4	THE WITNESS: I addressed it in
5	while we're talking about that, were they	5	the context of my report, and inherent
6	ever asked after enrollment, again, whether	6	in any observational study is the
7	or not they switched to using talc, or people	7	potential for misclassification.
8	who said they were using talc stopped?	8	QUESTIONS BY MR. TISI:
9	MS. MILLER: Objection.	9	Q. You didn't analyze in your
10	THE WITNESS: They were not	10	report whether the cohort studies in talc
11	asked again.	11	were flawed or limited in reliability by
12	QUESTIONS BY MR. TISI:	12	misclassification studies, did you?
13	Q. Okay. Houghton?	13	MS. MILLER: Objection.
14	A. In Houghton, participants	14	THE WITNESS: Can you ask that
15	were completed an annual questionnaire at	15	again?
16	enrollment. And I don't know if I have the	16	QUESTIONS BY MR. TISI:
17	specific year that the questionnaire was	17	Q. Yes.
18	asked, because study subject enrolled from	18	Other than making the general
19	1993 to 1998 and then were followed	19	observation, did you analyze in your report
20	Q. How many years?	20	whether the cohort talc studies were flawed
21	A. An average of 12 years.	21	or limited in reliability by
22	Q. Okay. Were they ever asked in	22	misclassification bias?
23	that 12 years whether some who had been on	23	A. So other than saying what I
24	talc went off, or some who were off talc went	24	said before, that inherent in all
25	on in those 12 years?	25	observational studies, which I talked about
	Page 303		Page 305
1	A. They weren't.	1	in my report, misclassification, other than
2	Q. Okay. So those were	2	that that's what I talked about in my
3	limitations on the cohort studies, correct?	3	report.
4	A. They're potential limitations	4	Q. Other than that, the answer is
5	of a cohort study.	5	no, you didn't discuss them in the context of
6	Q. And you don't address those in	6	the individual studies?
7	your report, do you?	7	MS. MILLER: Objection.
8	A. Again, it's inherent in a	8	MR. LOCKE: Objection.
9	cohort study that there are potential	9	THE WITNESS: But I discussed
10	there's potential exposure misclassification.	10	it within my report, which is within
	r r r		it within my report, which is within
11	Q. I understand.	11	the context of the individual studies.
11 12		11 12	* * .
	Q. I understand.	1	the context of the individual studies.
12	Q. I understand. Did you address those well,	12	the context of the individual studies. QUESTIONS BY MR. TISI:
12 13	Q. I understand. Did you address those well, in cohort studies they can be asked every	12 13	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of
12 13 14	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do	12 13 14	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology
12 13 14 15	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that.	12 13 14 15	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength.
12 13 14 15 16	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that. A. And there's still potential for	12 13 14 15 16	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength. On page 32 of your report, you
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12 13 14 15 16 17 18 19	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that. A. And there's still potential for misclassification. Q. Understood. But these particular studies	12 13 14 15 16 17 18 19	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength. On page 32 of your report, you say you have a section called "Lack of Strength of Associations." Page 32, bottom, Section D.
12 13 14 15 16 17 18 19 20	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that. A. And there's still potential for misclassification. Q. Understood. But these particular studies were particularly vulnerable to that bias	12 13 14 15 16 17 18 19 20	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength. On page 32 of your report, you say you have a section called "Lack of Strength of Associations." Page 32, bottom, Section D. A. Lack of Strength of
12 13 14 15 16 17 18 19 20 21	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that. A. And there's still potential for misclassification. Q. Understood. But these particular studies were particularly vulnerable to that bias because they asked only once at the beginning	12 13 14 15 16 17 18 19 20 21	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength. On page 32 of your report, you say you have a section called "Lack of Strength of Associations." Page 32, bottom, Section D. A. Lack of Strength of Association.
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12 13 14 15 16 17 18 19 20 21 22 23	Q. I understand. Did you address those well, in cohort studies they can be asked every year about their exposures, right? Some do that. A. And there's still potential for misclassification. Q. Understood. But these particular studies were particularly vulnerable to that bias because they asked only once at the beginning of the studies, true? A. Not necessarily, no.	12 13 14 15 16 17 18 19 20 21 22 23	the context of the individual studies. QUESTIONS BY MR. TISI: Q. Let's talk about strength of the association. We talked about methodology generally. Let's talk about strength. On page 32 of your report, you say you have a section called "Lack of Strength of Associations." Page 32, bottom, Section D. A. Lack of Strength of Association. Q. Do you see that? A. Yes.

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r the likelihood that the relationship sal." I see that. You use the term "weak" or vely weak" association seen in the d ovarian cancer relationship, t? You call them weak. Where are you? For example, the very the ast the second full paragraph, last ines up you say, "Relatively weak ations." I'm not seeing where you're ng to. Right there. MS. MILLER: It's hard to see side down. MR. TISI: Well, I can't do it yo ther way unless you want me to uch over and point at the witness.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I wrote that in my report. Q. Okay. And you cite a 1982 article by Widner. A. That's correct. Q. And on page 46, you state that "Risk ratios between 1.2 and 1.6 are by definition weak associations." That's your conclusion sentence. First sentence, third paragraph down. "This is by definition a weak association." A. That's correct. Q. Okay. Where is that definition written? MS. MILLER: Objection. THE WITNESS: Well, I would have to go back and look at the article that I referenced. QUESTIONS BY MR. TISI:
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Right there. MS. MILLER: It's hard to see side down. MR. TISI: Well, I can't do it y other way unless you want me to uch over and point at the witness.	16 17 18 19 20 21	written? MS. MILLER: Objection. THE WITNESS: Well, I would have to go back and look at the article that I referenced. QUESTIONS BY MR. TISI:
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MR. TISI: Well, I can't do it y other way unless you want me to uch over and point at the witness.	19 20 21	have to go back and look at the article that I referenced. QUESTIONS BY MR. TISI:
y other way unless you want me to ach over and point at the witness.	20 21	article that I referenced. QUESTIONS BY MR. TISI:
ich over and point at the witness.	20 21	QUESTIONS BY MR. TISI:
I said three sentences up from		Q. Is that the only is that the
e second paragraph.		only article that you can think of?
MS. MILLER: Three second up	23	A. It's the only article that
m the bottom of the second	24	comes to mind that I could find, but it's a
ragraph?	25	generally accepted generally accepted in
Page 307		Page 309
MR. TISI: Yeah.	1	the epidemiologic community that anything
MS. MILLER: Oh, okay. I see	2	less than 2 is a weak association.
w. I misunderstood you.	3	Q. Anything less than 2 is weak?
THE WITNESS: I see that.	4	A. So, again, it depends, because
TONS BY MR. TISI:	5	there are certain studies that may show, that
And on page 42, you say, "It is	6	have been designed properly, that bias and
y accepted that risk ratios that	7	confounding aren't a problem, that analysis
f risk measures between 1.1 and 2.0	8	is great and interpretation is fine where
nt a weak association between exposure	9	that association, that relative risk, even
come."	10	though it's less than 2 considered weak, that
What page is that on?	11	may be that may point towards causality
42.	12	between an exposure and an outcome.
And where is that?	13	However, when bias and
I'm sorry. I'm sorry, page 43,	14	confounding are potential to be present
,, page 10,	15	for instance, if we're going to talk about
paragraph. "Although there is no	16	confounding, which I think I should
	17	Q. I'm asking you about the
paragraph. "Although there is no	18	definition, where, by definition, something
paragraph. "Although there is no enumeric definition of a strong	19	less than 2.0 is weak.
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is	20	A. It's a generally accepted
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is y accepted that risk that ratios	21	Q. Generally accepted?
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is y accepted that risk that ratios neasures between 1.1 and 2.0	41	A. It's generally accepted in the
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is y accepted that risk that ratios neasures between 1.1 and 2.0 at a weak association between exposure come."	22	A. It's generally accepted in the
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is y accepted that risk that ratios neasures between 1.1 and 2.0 at a weak association between exposure come." Is that right?		epidemiology community.
paragraph. "Although there is no e numeric definition of a strong ion between exposure and risk, it is y accepted that risk that ratios neasures between 1.1 and 2.0 at a weak association between exposure come."	22	
•	on between exposure and risk, it is y accepted that risk that ratios neasures between 1.1 and 2.0 t a weak association between exposure	on between exposure and risk, it is y accepted that risk that ratios heasures between 1.1 and 2.0 t a weak association between exposure ome." 17 18 29 20 21

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	Page 310		Page 312
1	QUESTIONS BY MR. TISI:	1	magnitude of effect modest with observed
2	Q. I'm going to show you	2	relative risks of 1.2 to 1.8.
3	Exhibit Number 31, which is the National	3	Q. Do you think the National
4	Cancer Institute statements on ovarian	4	Cancer Institute doesn't understand the
5	cancer.	5	doesn't understand the concept of strength of
6	Have you seen this before?	6	association and this generally accepted
7	A. No.	7	principle that anything under 2.0 is weak?
8	MR. LOCKE: Objection.	8	MS. MILLER: Objection.
9	QUESTIONS BY MR. TISI:	9	MR. LOCKE: Objection.
10	Q. Okay. If you look at the	10	THE WITNESS: So again, I'm not
11	second page, it talks about factors within	11	here to give an opinion on the
12	"with adequate evidence of increased risk of	12	National Cancer Institute. I don't
13	ovarian, fallopian tube and primary	13	know who put this document together,
14	peritoneal cancers."	14	and I did say that it depends. It
15	Do you see that?	15	depends on the study.
16	A. I see that.	16	QUESTIONS BY MR. TISI:
17	Q. You see they talk about	17	Q. Okay.
18	endometriosis.	18	A. But in general, a relative risk
19	MS. MILLER: Can you point me	19	of or an odds ratio of less than 2 is a
20	to that?	20	weak association.
21	MR. TISI: Yeah. You see where	21	Q. What about obesity and height,
22	endometriosis is?	22	the next one? It says, based on fair
23	MS. MILLER: No, that's why I'm	23	evidence not even great evidence but fair
24	asking you to point	24	evidence obesity and height are associated
25	MR. TISI: It's on page 3 of	25	with a modest increased risk of ovarian
	Page 311		Page 313
1	18.		
	10.	1	cancer, and they defined it as a 1.1.
2	MS. MILLER: Oh, sorry, I was	2	Do you see that?
2 3	MS. MILLER: Oh, sorry, I was on page 4. I thought you said		Do you see that? A. I see, based on fair evidence,
3 4	MS. MILLER: Oh, sorry, I was on page 4. I thought you said factors.	2 3 4	Do you see that? A. I see, based on fair evidence, increases in height and body mass indexes are
3 4 5	MS. MILLER: Oh, sorry, I was on page 4. I thought you said factors. QUESTIONS BY MR. TISI:	2 3 4 5	Do you see that? A. I see, based on fair evidence, increases in height and body mass indexes are associated with a modest increase in risk of
3 4 5 6	MS. MILLER: Oh, sorry, I was on page 4. I thought you said factors. QUESTIONS BY MR. TISI: Q. See endometriosis?	2 3 4 5 6	Do you see that? A. I see, based on fair evidence, increases in height and body mass indexes are associated with a modest increase in risk of ovarian cancer.
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3 4 5 6 7 8	MS. MILLER: Oh, sorry, I was on page 4. I thought you said factors. QUESTIONS BY MR. TISI: Q. See endometriosis? Do you see that? A. I do see that.	2 3 4 5 6 7 8	Do you see that? A. I see, based on fair evidence, increases in height and body mass indexes are associated with a modest increase in risk of ovarian cancer. And then where are you seeing the 1.1?
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Christian Merlo, M.D., MPH

Page 314 Page 316 1 Q. So this is a laughable 1 But because of other factors. 2 document, huh? 2 maybe factors, considerations that Bradford 3 MR. LOCKE: Objection. 3 Hill has, such as consistency or dose THE WITNESS: I'm not saying 4 response, do lead one to conclude that 4 5 5 I'm laughing at this, but I'm just there's a causal association between exposure 6 6 telling you that if Dr. Gordis came and outcome. into the room and I tried to explain 7 7 And if we're talking about 8 to him that a relative risk of 1.1 is 8 environmental tobacco smoke and lung cancer, 9 modest, he'd laugh me out of the room. 9 studies are consistent, and there's a 10 10 consistent dose response. QUESTIONS BY MR. TISI: 11 Q. They all show -- they all 11 Q. Now he's an expert? 12 I'm not saying he's an expert. 12 show -- they all show statistically A. 13 13 significant associations. Every cohort and O. Okay. 14 He was my teacher. 14 case-control study shows consistent A. 15 Okav. 15 association in secondhand smoke; is that what Q. 16 And I wouldn't do that in front 16 you're testifying to? A. 17 of him. 17 MS. MILLER: Objection. 18 MR. LOCKE: Objection. 18 (Merlo Exhibit 32 marked for THE WITNESS: I didn't say 19 identification.) 19 QUESTIONS BY MR. TISI: 20 20 that. 21 O. Okay. Let's look at Exhibit 21 **QUESTIONS BY MR. TISI:** 22 Number 32, which is another chapter out of 22 Q. Okay. the textbook Modern Epidemiology by 23 23 A. I said that there's 24 Dr. Rothman, which I have marked as Exhibit 24 consistency. And there's consistency in the 25 Number 32. And on page 25 of 30, it talks 25 literature that secondhand smoke in Page 315 Page 317 1 about the strength criteria. 1 sufficient dose over sufficient time -- so a 2 He says -- and I want to ask 2 dose response plus consistency -- can lead 3 you whether you agree with it or not -- under 3 one to conclude that there is a causal the strength of association, second -- two 4 4 association between secondhand smoke and, 5 sentences from the bottom of the first 5 say, lung cancer. 6 6 Q. So where is the statement that paragraph, "Of special importance, Cornfield, 7 7 et al., acknowledged that having only a weak you have to -- in the absence of a high risk 8 8 ratio or in the presence of a weak risk ratio association does not rule out causal 9 association. Today, some associations, such 9 that you need to have dose response and 10 as those between smoking and cardiovascular 10 consistency? 11 11 disease or between environmental tobacco A. Because --12 12 Q. Or is that -- is that your smoke and lung cancer are accepted by most as 13 causal, even though the associations are postulate? 13 14 considered weak." 14 A. No, that is not my postulate. 15 That's -- those things oftentimes go 15 Do you agree with that? 16 A. So I'm going to -- if you just 16 hand in hand. And the reason I say this, if 17 give me a second to read it over again. 17 there's a relative risk of 200, it's going to 18 be very difficult to explain that away. 18 Q. Uh-huh. 19 Say we used the pulmonary 19 Because I'm seeing this for the A. hypertension example. The odds ratio is 23 20 20 first time. 21 for patients that use that medication for 21 So again, we're talking about 22 more than three months. So -- and that gets 22 generalizations here, and there are -- there at the dose response and gets at the factors 23 may be instances where a relative risk or an 23 24 odds ratio is less than 2, and it's 24 that may -- the other considerations that 25 Bradford Hill brought out, namely, namely, 25 considered a weak association.

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	Page 318		Page 320
1	the dose response.	1	objection that this is an excerpt that
2	So secondhand smoke over a	2	was cut off at the end, and it's not a
3	sufficient amount of time, given a sufficient	3	complete chapter or a complete
4	amount of exposure, even though there may be	4	anything.
5	a weak relative risk, that potentially could	5	MR. TISI: Okay. Well, it's a
6	be a causal could one could conclude	6	complete paragraph that talks about
7	causality because of the other considerations	7	the strength of association, so
8	that are present.	8	let's
9	Q. On the next page I'm going	9	MR. LOCKE: Objection.
10	to ask you about secondhand smoke. Before I	10	THE WITNESS: I'm sorry, I just
11	do, let's go to the next page. It says,	11	need a little bit of time to find it.
12	"These examples remind us that a strong	12	QUESTIONS BY MR. TISI:
13	association is neither necessary nor	13	Q. That's fine.
14	sufficient for causality and that weakness	14	A. Okay. So I have three pages
15	isn't even necessary nor sufficient for the	15	photocopied here.
16	absence of causality."	16	Q. Correct.
17	Do you see that?	17	So if you go to the last page,
18	A. Is that the second sentence on	18	it has a paragraph with a bullet point that
19	the top?	19	says, "Strength of Association."
20	Q. Yes. "These examples remind us	20	Do you see that?
21	that a strong association is neither	21	And if you read it and tell me
22	necessary nor sufficient for causality and	22	where Dr. Oleckno talks about strong,
23	that weakness is neither necessary nor	23	moderate and weak associations.
24	sufficient for absence of causality."	24	MS. MILLER: Objection.
25	Do you agree with that?	25	MR. LOCKE: Objection.
	Page 319		Page 321
1	A. So I think that this is one of	1	THE WITNESS: I think the
2	the one of the things that Bradford Hill	2	Oleckno textbook says in general, the
3	in his article said, that these are	3	stronger an association between a
4	considerations, and that if there is a risk	4	given exposure and outcome, the more
5	ratio, whether it's a relative risk or a odds	5	likely association is causal.
6	ratio of 200, it's difficult to explain that	6	It's also referencing a table,
7	away.	7	6.3, which is not here, so I'm not
8	Could it be explained away?	8	sure how I can even answer that.
9	Sure, if we didn't measure some factor that	9	QUESTIONS BY MR. TISI:
10	is associated with the exposure and the	10	Q. Yeah, but you said but,
11	outcome and is not in between the causal	11	Doctor, you said here you said here at the
12	pathway. But it it's a reason to use	12	end "by definition." You use the phrase "by
12	1 *		
13	these as considerations.	13	definition," "a 1.2 to 1.6 by definition is
	* *	13 14	
13	these as considerations.		definition," "a 1.2 to 1.6 by definition is
13 14	these as considerations. And further, if we're talking	14	definition," "a 1.2 to 1.6 by definition is weak."
13 14 15	these as considerations. And further, if we're talking about a weak association, say a weak relative	14 15	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that
13 14 15 16	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if	14 15 16	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that
13 14 15 16 17	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if there are other considerations that add to	14 15 16 17	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that definition is.
13 14 15 16 17 18	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if there are other considerations that add to it, say dose response or consistency among	14 15 16 17 18	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that definition is. A. It's an accepted definition in
13 14 15 16 17 18 19	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if there are other considerations that add to it, say dose response or consistency among studies, then that supports causality.	14 15 16 17 18 19	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that definition is. A. It's an accepted definition in epidemiology.
13 14 15 16 17 18 19 20	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if there are other considerations that add to it, say dose response or consistency among studies, then that supports causality. Q. Let me go to the Oleckno	14 15 16 17 18 19 20	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that definition is. A. It's an accepted definition in epidemiology. MS. MILLER: Objection.
13 14 15 16 17 18 19 20 21	these as considerations. And further, if we're talking about a weak association, say a weak relative risk or odds ratio, that less than 2, if there are other considerations that add to it, say dose response or consistency among studies, then that supports causality. Q. Let me go to the Oleckno article the Oleckno textbook again, and	14 15 16 17 18 19 20 21	definition," "a 1.2 to 1.6 by definition is weak." And I don't see that definition, so you need to tell me where that definition is. A. It's an accepted definition in epidemiology. MS. MILLER: Objection. QUESTIONS BY MR. TISI:
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	Page 322		Page 324
1	textbook and I've never seen a definition,	1	MR. LOCKE: Objection.
2	and you don't provide it. So I want to know	2	MS. MILLER: Objection.
3	where you find it	3	QUESTIONS BY MR. TISI:
4	MR. LOCKE: Objection.	4	Q. You're cherry-picking.
5	MS. MILLER: Objection.	5	I'm going to show you what
6	QUESTIONS BY MR. TISI:	6	Dr. Siemiatycki says. Actually, let me just
7	Q other than the Australian	7	choose actually I'm going to choose
8	thing that we talked about before. Where?	8	Dr. Siemiatycki. Here's his report. I'm
9	MS. MILLER: Objection.	9	going to attach it as Exhibit Number 33, his
10	MR. LOCKE: Objection.	10	discussion of that issue.
11	THE WITNESS: It's in my	11	(Merlo Exhibit 33 marked for
12	reference. We can pull that and look	12	identification.)
13	at it, if you'd like.	13	QUESTIONS BY MR. TISI:
14	QUESTIONS BY MR. TISI:	14	Q. He's one of the people you
15	Q. Okay. I'm going to find it in	15	criticize, right?
16	your references?	16	A. I critiqued plaintiffs'
17	A. It's that reference.	17	reports.
18	Q. Okay. That Australian white	18	Q. Right.
19	paper?	19	And you say, "Dr. Siemiatycki
20	MS. MILLER: Objection.	20	states," and you have a quote, which indeed I
21	THE WITNESS: Let me look	21	will tell you appears in the report, but it's
22	through. I'll look through my report	22	not the whole thing of what he says. Does
23	again.	23	it would you agree?
24	QUESTIONS BY MR. TISI:	24	MS. MILLER: Objection.
25	Q. Actually, Doctor, I think	25	THE WITNESS: Can you ask that
	Q. Hetaariy, Bootor, I amme		THE WITHESS. Can you ask that
	Daga 222		
	Page 323		Page 325
1	that's where it is. I'm not going to ask you	1	Page 325 again? I'm not sure what you're
1 2	that's where it is. I'm not going to ask you to move on.	1 2	again? I'm not sure what you're asking me.
	that's where it is. I'm not going to ask you to move on. But you criticize plaintiffs'	I	again? I'm not sure what you're
2 3 4	that's where it is. I'm not going to ask you to move on. But you criticize plaintiffs' experts because they say they call this	2	again? I'm not sure what you're asking me.
2 3 4 5	that's where it is. I'm not going to ask you to move on. But you criticize plaintiffs' experts because they say they call this strong, this 1.2 to 1.6 as strong.	2 3 4 5	again? I'm not sure what you're asking me. QUESTIONS BY MR. TISI: Q. Yes. I'm going to read his section that talks about strength of
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82 (Pages 322 to 325)

	Page 326		Page 328
1	risk ratio could not have occurred by	1	That means the best estimate from an ep
2	chance."	2	from the epidemiologic literature is that
3	QUESTIONS BY MR. TISI:	3	women who regularly used talcum powder
4	Q. Do you see that?	4	products in the genital area had a 28 percent
5	MR. LOCKE: Objection.	5	higher risk of ovarian cancer than a woman
6	QUESTIONS BY MR. TISI:	6	who did not use such powder. As I illustrate
7	Q. It's on page 63, and that's the	7	in Table 11, which I attach" because it
8	quote you had.	8	refers to there, if you take a look on
9	MS. MILLER: You objected to	9	page at the on page 87, it has a
10	cherry-picking. These are seven	10	Table 11. He lists numerous kinds of
11	cherry-picked pages from an expert	11	urban air pollution, trichloroethylene,
12	report.	12	diesel engine emissions, benzene, domestic
13	MR. TISI: They're not	13	radon gas, secondhand cigarette smoke,
14	cherry-picked pages. Every part that	14	intermittent, intense sun exposure, et
15	talks about	15	cetera. He lists a lot of them, all within a
16	MS. MILLER: I don't know what	16	relative risk of 1.09, with the highest being
17	cherry-picked means to you, but	17	1.64.
18	MR. TISI: Well, Counsel, then	18	Do you see that table?
19	keep your objections to yourself.	19	A. I do.
20	MR. LOCKE: Objection.	20	Q. "As I illustrate in Table 11
21	MR. TISI: "Objection, form,"	21	with a few examples, this relative risk is in
22	is fine.	22	line with well-recognized risk factors for
23	QUESTIONS BY MR. TISI:	23	cancer and other diseases. For example, it
24	Q. Doctor, this is the paragraph	24	is well-accepted now that people living in an
25	that you quote in your report, correct? It's	25	urban neighborhood in which there is in
	, , , , , ,		
	Page 327		Page 329
	<u> </u>		rage 329
1		1	which the air is highly polluted with
1 2	the last sentence of a full paragraph. A. I'd have to look at his full	1 2	
	the last sentence of a full paragraph.		which the air is highly polluted with
2	the last sentence of a full paragraph. A. I'd have to look at his full	2	which the air is highly polluted with particulate matter have a 5 to 10 percent
2	the last sentence of a full paragraph. A. I'd have to look at his full report to know if that's the one I'm quoting. Said that again somewhere.	2 3	which the air is highly polluted with particulate matter have a 5 to 10 percent excess risk of lung cancer compared to people
2 3 4	the last sentence of a full paragraph. A. I'd have to look at his full report to know if that's the one I'm quoting.	2 3 4	which the air is highly polluted with particulate matter have a 5 to 10 percent excess risk of lung cancer compared to people living in a less polluted urban neighborhood.
2 3 4 5	the last sentence of a full paragraph. A. I'd have to look at his full report to know if that's the one I'm quoting. Said that again somewhere. Q. Okay. Doctor, it says, "Such a high" you look at your report on page 43.	2 3 4 5	which the air is highly polluted with particulate matter have a 5 to 10 percent excess risk of lung cancer compared to people living in a less polluted urban neighborhood. Also is well-accepted that workers exposed to a solvent called trichloroethylene had about
2 3 4 5 6	the last sentence of a full paragraph. A. I'd have to look at his full report to know if that's the one I'm quoting. Said that again somewhere. Q. Okay. Doctor, it says, "Such a	2 3 4 5 6	which the air is highly polluted with particulate matter have a 5 to 10 percent excess risk of lung cancer compared to people living in a less polluted urban neighborhood. Also is well-accepted that workers exposed to
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	Page 330		Page 332
1	QUESTIONS BY MR. TISI:	1	MS. MILLER: Again, I'm going
2	Q. And you	2	to have to have the same objection. I
3	A. However, this says nothing	3	don't know why you didn't just provide
4	about the strength of association. It just	4	the entire expert report.
5	says that there's an association between	5	This is pages 11, 12, 13, 14,
6	these agents and this disease with this	6	15, 16. We don't have pages 1 to 10.
7	relative risk.	7	We don't have
8	These are all under 2. That	8	MR. TISI: Counsel, I got your
9	doesn't that says nothing about the	9	objection. I got your
10	strength. It's a weak association of all of	10	MS. MILLER: pages after 16,
11	them.	11	and page 16 ends in the middle of a
12	Q. Okay. Then he goes on and he's	12	sentence.
13	asked about that in his deposition, and I'm	13	MR. TISI: I got your I got
14	going to attach that. And I'm not going to	14	your objection, Counsel.
15	spend a lot of time on it, but for the	15	MR. LOCKE: Same objection.
16	record, that will be on the record, Exhibit	16	QUESTIONS BY MR. TISI:
17	Number 34.	17	Q. Doctor, can you turn to page 15
18	(Merlo Exhibit 34 marked for	18	of Dr. Moorman's report, which I have put
19	identification.)	19	here, which I will represent to you is a
20	QUESTIONS BY MR. TISI:	20	whole section on strength of association.
21	Q. And did you cite anything from	21	She has a paragraph, "The
22	his deposition?	22	overall association seen in talc/ovarian
23	MS. MILLER: Objection.	23	cancer meta-analyses, as well as many other
24	THE WITNESS: I'd have to look	24	individual studies, are statistically
25	through my report.	25	significant, indicating an increased risk of
	unough my report.		organization, marcuring an increased risk of
	Page 331		Page 333
			1.1.51
1	QUESTIONS BY MR. TISI:	1	approximately 25 to 30 percent. While not as
1 2	QUESTIONS BY MR. TISI: Q. Let me show you another	1 2	
		1	approximately 25 to 30 percent. While not as
2	Q. Let me show you another	2	approximately 25 to 30 percent. While not as high as other relationship, like smoking and
2	Q. Let me show you another example: Dr. Moorman. Dr. Moorman, who you also criticize as saying, "Taken as a whole, the overwhelming statistical strength of	2 3	approximately 25 to 30 percent. While not as high as other relationship, like smoking and lung cancer, these relative risks are in line
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Let me show you another example: Dr. Moorman. Dr. Moorman, who you also criticize as saying, "Taken as a whole, the overwhelming statistical strength of these studies" sorry, "by the strength of the studies, whose results are replicated over decades and over a wide variety of populations and investigators, further supported by consistent meta-analysis, weigh heavily in favor of a causal inference." That was what you said that Dr. Moorman said, correct? A. You'd have to refer to me where I said that. Q. On page 43 and 44 of your report. A. And I apologize. I don't have these this memorized. So, you know, you're reading stuff Q. Well, I do, and I didn't write it. Here you go.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	approximately 25 to 30 percent. While not as high as other relationship, like smoking and lung cancer, these relative risks are in line with other generally accepted causal relationships. Example, secondhand smoke and lung cancer: I consider the strength of association as seen in the ovarian cancer epidemiologic studies to be an important factor in favor of a causal relationship between talc and ovarian cancer, particularly when considered along with the consistency and association seen across these studies." Dr. Moorman is not has characterized what the studies show. The numbers are the numbers, correct? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: You'd have to show me what you're referring to. The numbers are the numbers. QUESTIONS BY MR. TISI: Q. All right. Well, let's do
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. Let me show you another example: Dr. Moorman. Dr. Moorman, who you also criticize as saying, "Taken as a whole, the overwhelming statistical strength of these studies" sorry, "by the strength of the studies, whose results are replicated over decades and over a wide variety of populations and investigators, further supported by consistent meta-analysis, weigh heavily in favor of a causal inference." That was what you said that Dr. Moorman said, correct? A. You'd have to refer to me where I said that. Q. On page 43 and 44 of your report. A. And I apologize. I don't have these this memorized. So, you know, you're reading stuff Q. Well, I do, and I didn't write it. Here you go. MS. MILLER: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	approximately 25 to 30 percent. While not as high as other relationship, like smoking and lung cancer, these relative risks are in line with other generally accepted causal relationships. Example, secondhand smoke and lung cancer: I consider the strength of association as seen in the ovarian cancer epidemiologic studies to be an important factor in favor of a causal relationship between talc and ovarian cancer, particularly when considered along with the consistency and association seen across these studies." Dr. Moorman is not has characterized what the studies show. The numbers are the numbers, correct? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: You'd have to show me what you're referring to. The numbers are the numbers. QUESTIONS BY MR. TISI: Q. All right. Well, let's do that. Dr. Moorman

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	Page 334		Page 336
1	of her report that he cites. Is that	1	saying that I think it's more accurate
2	correct?	2	just to describe it as it is, a 25 to
3	(Merlo Exhibit 36 marked for	3	30 percent increase of risk of ovarian
4	identification.)	4	cancer, but I don't know what she's
5	QUESTIONS BY MR. TISI:	5	referring to there
6	Q. Here's your here's Exhibit	6	QUESTIONS BY MR. TISI:
7	Number 36, please.	7	Q. Okay.
8	She's asked the questions on	8	A whether that's one study,
9	page 249 of her report of her deposition.	9	all studies, a meta-analysis, anything.
10	"I think you're conflating or	10	Q. Okay.
11	misunderstanding my question." This is the	11	A. One could also say that a
12	Johnson & Johnson lawyer asking the question.	12	relative risk of 1.25 or 1.30 is a weak
13	"I think you're conflating or	13	association.
14	you're misunderstanding my question because	14	Q. Okay. But you are
15	you're answering the question"	15	characterizing what they testified to, and
16	A. I'm sorry, where are we?	16	you were cherry-picking statements from their
17	Q. Page 249, starting on line 3.	17	report, were you not?
18	Okay? "And I think you're	18	MS. MILLER: Objection.
19	conflating or you're misunderstanding my	19	MR. LOCKE: Objection.
20	question because you're answering the	20	THE WITNESS: I don't know what
21	question about whether the association is	21	you mean by "cherry-picking."
22	real or not real, and my question for you is	22	QUESTIONS BY MR. TISI:
23	whether the association is weak, modest or	23	Q. Meaning taking
24	strong. How would you characterize it?" to	24	A. I read their depositions
25	Dr. Moorman.	25	sorry, I read their reports and I critiqued
23	Di. Moofinali.	23	sorry, i read their reports and i erridued
	Page 335		Page 337
1	Her answer: "Answer, as I	1	their reports. And by saying that a relative
2	would as I have said, there is no absolute	2	risk of 1.2 is a strong association is so far
3	terminology that would say what is a weak	3	out of line of the epidemiologic community
4	association, what is modest and what is	4	that that is my critique.
5	strong. So I think it is more accurate just	5	MR. TISI: Okay. We're about
6	to describe it as it is, a 25 to 30 percent	6	ready to go into a new area, so if you
7	increased risk of ovarian cancer."	7	want to take a break, this is a good
8	Do you see that?	8	time unless you want me to just plow
9	A. I see that.	9	forward.
10	Q. Okay. She didn't characterize	10	MS. MILLER: How long is the
11	it as strong, did she?	11	next area?
12	MS. MILLER: Objection.	12	MR. TISI: I have no idea. It
13	MR. LOCKE: Objection.	13	depends on whether he says "it
14	QUESTIONS BY MR. TISI:	14	depends" all the time.
15	Q. She characterized it by the	15	MR. LOCKE: Objection.
16	number, correct?	16	THE WITNESS: I can take a
17	MS. MILLER: Objection.	17	break.
18	MR. LOCKE: Objection.	18	MR. TISI: Perfect.
19	MS. MILLER: Are you asking	19	THE WITNESS: Get some coffee.
20	ever or here or	20	MR. TISI: Perfect.
21	MR. TISI: I'm asking I'm	21	VIDEOGRAPHER: The time is
22	asking when she was asked the question	22	3:01 p.m. We're going off the record.
	at deposition.	23	(Off the record at 3:01 p.m.)
23	at deposition.		
23 24	MR. LOCKE: Objection.	24	VIDEOGRAPHER: The time is
	•	24 25	VIDEOGRAPHER: The time is 3:16 p.m., and we're back on the

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	Page 338		Page 340
1	record.	1	are the risk ratios, correct?
2	QUESTIONS BY MR. TISI:	2	A. Yes, the first column's the
3	Q. Doctor, could you go to page 31	3	study authors and the dates. The second
4	of your report? I'm going to talk about	4	column is either the odds ratio, relative
5	consistency and statistical significance.	5	risk or hazard ratio.
6	A. Sure.	6	Q. Can we call them risk ratios
7	Q. We've spent a lot of time	7	generally?
8	talking about consistency and your opinion	8	Can we call them is there a
9	that there is no consistency, so I think	9	general I thought we could call them risk
10	we'll be able to go through this pretty	10	ratios, but
11	quickly.	11	A. Sure. It's just that in an
12	But if you go to page 31, you	12	an odds ratio is something that's determined
13	criticize plaintiffs' experts well, you	13	in a case-control study and a relative risk,
14	say, "Lack of consistency between studies.	14	which in a hazard ratio deal with time, and
15	One of the most striking aspects of their	15	those are involved in cohort studies.
16	studies is their inconsistency."	16	Q. I understand. I understand.
17	Do you see that?	17	But the second column are the
18	A. No.	18	risk ratios generally?
19	Where am I saying that?	19	A. Estimates of risk, yes.
20	Q. First sentence of your	20	Q. Estimates of risk.
21	Section A on page 31.	21	And the third column are the
22	A. Okay.	22	confidence interval.
23	Q. Okay. And you note, and I'm	23	And tell me what a confidence
24	summarizing here, that there are seven	24	interval is.
25	hospital-based studies, four cohort studies	25	A. A confidence interval is when
	Page 339		Page 341
1	and some population studies that have	1	you do an analysis and you get a some
2	statistically insignificant results.	2	estimate of risk, some point estimate, which
3	A . 1		
J	And we talked about that	3	would be that second column. Then you're
4	before; do you recall?	3 4	
			would be that second column. Then you're
4	before; do you recall?	4	would be that second column. Then you're given then you obtain what's called a
4 5	before; do you recall? A. We talked about cohort studies.	4 5	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort
4 5 6	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We	4 5 6	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance
4 5 6 7	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We	4 5 6 7	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall.
4 5 6 7 8	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in	4 5 6 7 8	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right.
4 5 6 7 8 9	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as	4 5 6 7 8 9	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the
4 5 6 7 8 9	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in	4 5 6 7 8 9	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1,
4 5 6 7 8 9 10	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as	4 5 6 7 8 9 10 11	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant
4 5 6 7 8 9 10 11	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based	4 5 6 7 8 9 10 11 12	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk.
4 5 6 7 8 9 10 11 12	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort	4 5 6 7 8 9 10 11 12 13	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval
4 5 6 7 8 9 10 11 12 13	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies.	4 5 6 7 8 9 10 11 12 13 14	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the
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4 5 6 7 8 9 10 11 12 13 14 15 16 17	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies. Q. Right. And on page 34 of your report, you have a chart that you put in summarizing the studies, correct?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the likely results are likely to be to a 95 percent certainty? A. The I don't know that I would say certainty. I think it's the it's the range of
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	before; do you recall? A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies. Q. Right. And on page 34 of your report, you have a chart that you put in summarizing the studies, correct? A. Page 34 is a chart that	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the likely results are likely to be to a 95 percent certainty? A. The I don't know that I would say certainty. I think it's the it's the range of the point estimate above which or below which
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies. Q. Right. And on page 34 of your report, you have a chart that you put in summarizing the studies, correct? A. Page 34 is a chart that summarizes case-control studies as well as cohort studies, and the case controls are	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the likely results are likely to be to a 95 percent certainty? A. The I don't know that I would say certainty. I think it's the it's the range of the point estimate above which or below which there would be a 2.5 percent chance of that
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies. Q. Right. And on page 34 of your report, you have a chart that you put in summarizing the studies, correct? A. Page 34 is a chart that summarizes case-control studies as well as cohort studies, and the case controls are broken down into hospital-based and	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the likely results are likely to be to a 95 percent certainty? A. The I don't know that I would say certainty. I think it's the it's the range of the point estimate above which or below which there would be a 2.5 percent chance of that point estimate falling.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. We talked about cohort studies. We talked about hospital-based studies. We talked about population-based studies. We talked about statistical significance in population-based studies as well as statistical insignificance in population-based studies as well as statistical insignificance in hospital-based and statistical insignificance within cohort studies. Q. Right. And on page 34 of your report, you have a chart that you put in summarizing the studies, correct? A. Page 34 is a chart that summarizes case-control studies as well as cohort studies, and the case controls are	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	would be that second column. Then you're given then you obtain what's called a 95 percent confidence interval, which is sort of the range within statistical significance where that point estimate might fall. Q. Right. A. And in general, when the 95 percent confidence interval overlies 1, that signifies a nonstatistically significant point estimate of risk. Q. But the confidence interval encompasses the range of likely where the likely results are likely to be to a 95 percent certainty? A. The I don't know that I would say certainty. I think it's the it's the range of the point estimate above which or below which there would be a 2.5 percent chance of that

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	7 240		244
	Page 342		Page 344
1	that usually relates to heterogeneity within	1	separate exhibit.
2	the study, a small study population, problems	2	(Merlo Exhibit 37 marked for
3	in collecting appropriate information.	3	identification.)
4	If the confidence interval is	4	QUESTIONS BY MR. TISI:
5	narrow, usually that reflects a larger study	5	Q. And I'm going to do it Exhibit
6	population.	6	Number 37.
7	Q. And the last column is your	7	A. Thank you.
8	assessment of the strength of the	8	Q. I'm going to come back to it,
9	association, if there is one, right?	9	and I don't want to keep flipping back and
10	You say, "Is it a statistically	10	forth to the pages.
11	significant association?"	11	A. Okay.
12	And that's your interpretations	12	Q. And this is your this chart
13		13	summarizes the the last column here
14	here, correct? A. It savs. "If there's a	14	
	, , , , , , , , , , , , , , , , , , ,		summarizes your view of the inconsistency of
15	statistically significant association."	15	these studies. The now are inconsistence
16	That's what's reported in the journal.	16	with the weaks?
17	Q. Okay. And then the "no" in the	17	MS. MILLER: Objection.
18	last column stands for not statistically	18	THE WITNESS: So what not
19	significant?	19	only that, I mean, what this does
20	A. The "no" stands for not	20	summarize, inconsistency within
21	statistically significant, that's correct.	21	population-based case-control studies
22	Q. And the "weak" stands for	22	where some studies show a weak
23	statistically significant and with your	23	statistically significant association
24	characterization of the strength of the	24	while some studies do not show any
25	association?	25	statistically significant association.
	Page 343		Page 345
1	Page 343 A. The "weak" stands for a weak	1	Page 345 But there's also differences
1 2		1 2	But there's also differences
	A. The "weak" stands for a weak statistically significant association.		But there's also differences in within study the same study
2	A. The "weak" stands for a weak statistically significant association.Q. But that's your	2	But there's also differences in within study the same study design. Say, within case controls,
2	A. The "weak" stands for a weak statistically significant association.Q. But that's your characterization; that's not the authors'?	2 3 4	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there
2 3 4 5	 A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all 	2 3 4 5	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them
2 3 4 5 6	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant	2 3 4 5 6	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant
2 3 4 5 6 7	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay.	2 3 4 5 6 7	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con
2 3 4 5 6 7 8	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak	2 3 4 5 6 7 8	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do
2 3 4 5 6 7 8 9	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes.	2 3 4 5 6 7 8	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically
2 3 4 5 6 7 8 9	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear,	2 3 4 5 6 7 8 9	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant.
2 3 4 5 6 7 8 9 10	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in	2 3 4 5 6 7 8 9 10	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing
2 3 4 5 6 7 8 9 10 11	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in epidemiology where it is universally accepted	2 3 4 5 6 7 8 9 10 11	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing the differences in that column, it's
2 3 4 5 6 7 8 9 10 11 12 13	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in epidemiology where it is universally accepted that a risk ratio of 1.17, which is one of	2 3 4 5 6 7 8 9 10 11 12	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing the differences in that column, it's summarizing the differences between
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in epidemiology where it is universally accepted that a risk ratio of 1.17, which is one of the things to 1.92 is weak. That's just your view of what the scientific community says? MS. MILLER: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing the differences in that column, it's summarizing the differences between study types and the differences within a similar study. QUESTIONS BY MR. TISI: Q. Understood. And I hear you.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in epidemiology where it is universally accepted that a risk ratio of 1.17, which is one of the things to 1.92 is weak. That's just your view of what the scientific community says? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: It's not my view of what the scientific community says. It's what the scientific community says.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing the differences in that column, it's summarizing the differences between study types and the differences within a similar study. QUESTIONS BY MR. TISI: Q. Understood. And I hear you. And what I'm trying to say is, it's your view that a weak statistically significant result is inconsistent with a non and I think you agreed to this before, but I want to make sure.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. The "weak" stands for a weak statistically significant association. Q. But that's your characterization; that's not the authors'? A. That is what is they're all below 2, statistically significant Q. Okay. A. Which suggests a weak association, yes. Q. Okay. And just to be clear, you can't point to me any textbook in epidemiology where it is universally accepted that a risk ratio of 1.17, which is one of the things to 1.92 is weak. That's just your view of what the scientific community says? MS. MILLER: Objection. MR. LOCKE: Objection. THE WITNESS: It's not my view of what the scientific community says. It's what the scientific community says. QUESTIONS BY MR. TISI:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	But there's also differences in within study the same study design. Say, within case controls, hospital-based case controls, there are seven of them, and none of them have a statistically significant association, and therefore case con sorry, four cohort studies which do not show any statistically significant. So it's not just summarizing the differences in that column, it's summarizing the differences between study types and the differences within a similar study. QUESTIONS BY MR. TISI: Q. Understood. And I hear you. And what I'm trying to say is, it's your view that a weak statistically significant result is inconsistent with a non and I think you agreed to this before, but I want to make sure. MS. MILLER: No.

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	Page 346		Page 348
1		1	was such a loaded question.
2	significant result is inconsistent with a		MR. TISI: Oh, it is. It's a
	for example, let's go back down here. Let's	2	loaded it's a loaded headnote.
3	take see the Rosenblatt study, which was	3	
4	one that was done at your institution. That	4	THE WITNESS: So I'm not
5	has was nonstatistically significant, in	5	accusing anybody of anything.
6	your view, and that is inconsistent with	6	MS. MILLER: Objection.
7	Cramer, which is shows a weak a weak	7	THE WITNESS: I'm just
8	statistically significant results.	8	reporting what the medical evidence
9	MS. MILLER: Objection. That	9	shows. And the medical evidence shows
10	mischaracterizes either his report or	10	that there is inconsistency among
11	his testimony, whichever it is that	11	similar study designs, inconsistency
12	you're characterizing.	12	between hospital-based and
13	QUESTIONS BY MR. TISI:	13	population-based case controls,
14	Q. Doctor, is it your view that,	14	inconsistency among population
15	using the example I just took, Cramer is	15	case-controls, and inconsistency
16	inconsistent with Rosenblatt?	16	between cohort studies and case
17	A. Which Cramer?	17	controls, all leading to
18	Q. Cramer 1982 and Rosenblatt	18	inconsistency.
19	1992.	19	I'm not accusing anyone of
20	A. So Cramer 1982 shows a point	20	anything. I'm just reporting what's
21	estimate of 1.92, and the 95 percent	21	in the medical literature.
22	confidence interval is 1.27 to 2.89.	22	QUESTIONS BY MR. TISI:
23	Rosenblatt, 1.27	23	
23 24		24	
	Q. No, Rosenblatt Rosenblatt	25	say they're inconsistent result. You say
25	1992, which is a hospital-based study.	25	plaintiffs' experts fabricate consistency
	Page 347		Page 349
1	A. Rosenblatt '92. Okay.	1	when there is none. Right?
2	Q. A hospital-based study.	2	So that's I mean, maybe I'm
3	A. So that's a 1.7, with the	3	splitting hairs, but that's a little bit more
4	95 percent confidence interval .7 to 3.9.	4	inflammatory than just simply saying, I find
5	Now, Cramer 1982 is	5	the studies inconsistent. Right?
6	statistically significant. Rosenblatt '92	6	MS. MILLER: Objection.
7	Cramer '82, statistically significant;	7	MR. LOCKE: Objection.
8	Rosenblatt '92, not statistically	8	THE WITNESS: I don't know. I
9	significance.	9	don't know what your definition of
10	Q. And are those inconsistent?	10	inflammatory is.
11	MS. MILLER: Objection.	11	QUESTIONS BY MR. TISI:
12	THE WITNESS: One is	12	Q. Okay. I think if somebody
13	statistically significant, and one is	13	accused you of fabrication, you might be
14	not statistically significant. They	14	thinking that that might be inflammatory, but
15	are inconsistent with each other.	15	we'll see.
16	QUESTIONS BY MR. TISI:	16	MR. LOCKE: Objection.
17		17	QUESTIONS BY MR. TISI:
18	Q. Okay. So and on page 44 and 45	18	Q. Let's move on.
18 19	of your report, you criticize plaintiffs' experts. You say, "I would agree" you	19	
19	experis You say T Would agree Voll		You say plaintiffs' experts
		1 20	
20	see, this is the part where you accuse them	20	uniformly assert I'm sorry, uniformly
20 21	see, this is the part where you accuse them of fabrication. Page 44. "Plaintiffs'	21	assert consistent criterion has been
20 21 22	see, this is the part where you accuse them of fabrication. Page 44. "Plaintiffs' experts fabricate consistency by ignoring	21 22	assert consistent criterion has been satisfied, and then you go on to say, "I
20 21 22 23	see, this is the part where you accuse them of fabrication. Page 44. "Plaintiffs' experts fabricate consistency by ignoring inconsistent studies," that heading.	21 22 23	assert consistent criterion has been satisfied, and then you go on to say, "I would agree with plaintiffs' experts that
20 21 22 23 24	see, this is the part where you accuse them of fabrication. Page 44. "Plaintiffs' experts fabricate consistency by ignoring inconsistent studies," that heading. Do you see that?	21 22 23 24	assert consistent criterion has been satisfied, and then you go on to say, "I would agree with plaintiffs' experts that there's some consistencies among the study,
20 21 22 23	see, this is the part where you accuse them of fabrication. Page 44. "Plaintiffs' experts fabricate consistency by ignoring inconsistent studies," that heading.	21 22 23	assert consistent criterion has been satisfied, and then you go on to say, "I would agree with plaintiffs' experts that

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	Page 350	Page 352
1	hospital-based case-control studies and among	here on in retyping this.
2	the large cohort studies showing no	here on in retyping this. I did not highlight statistically significant. So if you would just do me a favor and take this pen and circle "statistically significant" in the middle of that paragraph, I'd appreciate that. MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. Go ahead, if you don't mind.
3	statistically significant inconsistencies"	statistically significant. So if you would
4	I'm sorry, "showing no association between	just do me a favor and take this pen and
5	talc exposure and ovarian cancer. By	5 circle "statistically significant" in the
6	contrast, the inconsistencies between	6 middle of that paragraph, I'd appreciate
7	hospital-based and population-based	that.
8	case-control and within population-based	MS. MILLER: Objection.
9	case-control studies."	9 QUESTIONS BY MR. TISI:
10	Did I read that right?	Q. Go ahead, if you don't mind.
11	Actually, let me I didn't	11 A. What do you want me to do?
12	read it right. Let me read it again.	Q. Just take statistically in
13	"I would agree with plaintiffs'	because in your document, you actually
14	experts that there are some consistencies	highlight and italicize "statistically
15	between studies, but those consistencies are	significant" in your correct?
16	among hospital-based case-control studies and	16 MS. MILLER: Huh?
17		17 QUESTIONS BY MR. TISI:
18	among large cohort studies showing no	
19	statistically significant association between	
20	talc exposure and ovarian cancer. By	paragraph. A. But that's not that's not
21	contrast, there are inconsistencies between	
22	hospital-based and population-based case-control studies and within	
23		
24	population-based case-control studies."	
25	Did I read that right?	the wrong one. MS. MILLER: This is the
23	A. Yes, sir.	WIS, WILLER. This is the
	Page 351	Page 353
1		
1	Q. Okay. And then you go on to	
1 2	Q. Okay. And then you go on to say and this is the statement that we	
1 2 3	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general	
1 2 3 4	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is	
1 2 3 4	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the	
1 2 3 4 5	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts	
1 2 3 4 5 6 7	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done
8	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship,	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done with this one?
8	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship, there must be consistency and statistically	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done with this one? MR. TISI: I'm just mark it.
8 9 10	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship, there must be consistency and statistically significant associations. Consistency is	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done with this one? MR. TISI: I'm just mark it. It's the early part. We'll leave it
9 10 11	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship, there must be consistency and statistically significant associations. Consistency is in relative risks that are not statistically	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done with this one? MR. TISI: I'm just mark it. It's the early part. We'll leave it there.
8 9 10 11 12	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship, there must be consistency and statistically significant associations. Consistency is in relative risks that are not statistically significant is not meaningful because that	paragraph MR. TISI: I apologize. I'm sorry, you're correct. It's Exhibit 39. (Merlo Exhibit 39 marked for identification.) MS. MILLER: So are we done with this one? MR. TISI: I'm just mark it. It's the early part. We'll leave it there. QUESTIONS BY MR. TISI:
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8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. Okay. And then you go on to say and this is the statement that we talked about before, the kind of the general rule that you set out. It says, "It is important to remember, contrary to the suggestion of several of plaintiffs' experts on page 45, that for this criteria to weigh in favor of finding a causal relationship, there must be consistency and statistically significant associations. Consistency is in relative risks that are not statistically significant is not meaningful because that sort of consistency does not provide any degree of confidence that the claim of association made by the study is more than random chance." Did I read that right? A. That's correct. (Merlo Exhibit 38 marked for identification.) QUESTIONS BY MR. TISI: Q. Okay. Now, I'm going to have	margraph margraph on the margraph margraph margraph on the marg
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89 (Pages 350 to 353)

	Page 354		Page 356
1	THE WITNESS: It's mentioned	1	A. I do see that.
1 2 3 4 5 6 7 8	twice, so	2	Q. Is there any mention of
2	QUESTIONS BY MR. TISI:	3	statistical significance in this?
		1	
4	Q. Well, the one that you	4	MS. MILLER: Objection.
5	highlighted in your report.	5	THE WITNESS: There is not.
6	A. Looks like consistency and	6	QUESTIONS BY MR. TISI:
7	statistically significant. This and this.	7	Q. Okay.
8	Q. And this is your rule that you	8	A. But there's not a reference
9	set out. It says, "Important to remember,"	9	saying that that if it's not there, the
10	and this is a we talked about this earlier	10	opposite.
11	in your deposition. Although there is no	11	Q. Okay. Does it also talk about
12	citation for this, you agree that this is	12	there needs to be consistency among study
13	your you believe that this is a generally	13	designs?
14	accepted principle in epidemiology?	14	MS. MILLER: Objection.
15	A. It's a generally accepted	15	QUESTIONS BY MR. TISI:
16	principle in epidemiology.	16	Q. This talks about among studies
17	Q. Okay. Doctor, have you seen	17	but not study design, does it?
18	references to the fact that statistical	18	MS. MILLER: Objection.
19	significance is not the test of consistency?	19	THE WITNESS: It says, "If an
20	A. You'd have to show me a	20	association observed, we would expect
21	reference.	21	it to be seen consistently within
22	Q. Okay, let's do that. Could you	22	subgroups of the population and in
23	go can you pull out Exhibit 23, which is	23	different populations," which may
24	the "From Association to Causation" chapter	24	involve different studies and
25	that Johns Hopkins uses in courses there?	25	different study designs.
20	that Johns Hopkins uses in courses there.		different study designs.
	Page 355		Page 357
1	It's the Gordis text.	1	QUESTIONS BY MR. TISI:
2	Do you see that?	2	Q. But it doesn't say study
3	Do you have it in front of you?	3	designs, does it?
4	A. I have Chapter 14, yes,	4	MS. MILLER: Objection.
5	Exhibit 23.	5	THE WITNESS: I don't think it
6		6	
	Q. Can you go to page 251. On		has to. That's inherent in the
7	page it talks about Replications of	7	statement.
8	Findings, which is the consistency issue,	8	QUESTIONS BY MR. TISI:
9	right?	9	Q. Okay. Now, I previously asked
10	MS. MILLER: Objection.	10	you whether you had done any independent
11	THE WITNESS: I see where it	11	research on studies of talc and ovarian
12	says "Replication of Findings."	12	cancer, and you said you had not.
13	QUESTIONS BY MR. TISI:	13	Do you recall that?
14	Q. And it says, "If the	14	MS. MILLER: Objection.
15	relationship is causal, we would expect to	15	QUESTIONS BY MR. TISI:
16	find consistency in different studies and in	16	Q. That was very early in the day.
17	different populations. Replication of	17	MS. MILLER: Objection.
18	findings is particularly important in	18	THE WITNESS: I don't recall.
19	epidemiology. If an association as observed,	19	I'm going to have to see it.
		1	
20	we can also we would also expect it to be	20	QUESTIONS BY MR. TISI:
21	seen consistently within subgroups of the	21	Q. Okay. Have you done any
22	population and in different populations and	22	studies in talc and ovarian cancer?
23	unless there is a clear reason to expect	23	A. What do you mean by "studies"?
24	different results."	24	Q. Have you done any observational
25	Do you see that?	25	studies on talc and ovarian cancer?
		1	

90 (Pages 354 to 357)

	Page 358		Page 360
1	A. I've reviewed the literature	1	the Rosenblatt study, Exhibit Number 40.
2	Q. Have you done any studies?	2	Did you actually read this
3	A on the potential causal	3	study?
4	association between talcum powder and ovarian	4	Å. I did.
5	cancer. I've reviewed the literature.	5	Q. Good.
6	Q. Have you authored any studies	6	Let's go, so we don't have to
7	on talc and ovarian cancer or designed any	7	spend a lot of time rereading it.
8	studies on talc and ovarian cancer?	8	A. I haven't memorized it, though.
9	A. And I believe I told you no	9	Q. Okay. One of the authors of
10	earlier on.	10	this study, if you'll notice, is a guy we
11	Q. That was my question.	11	mentioned a couple times today, Dr. Szklo.
12	Now, you mentioned in your	12	He's the second author.
13	report that there are seven hospital-based	13	A. Szklo, yes.
14	case-control studies examining the	14	Q. Szklo.
15	association between talc and ovarian cancer.	15	He's at the school. He's a
16	A. Where did I say that?	16	full professor there.
17	Q. It's in your chart, and you	17	Have you ever said, you know,
18	mentioned it several times today.	18	
19		1	"Doctor, there's a study done at our school.
20	MS. MILLER: You just said,	19 20	What do you think about this relationship?
21	this is in your report.		You've published on it."
22	THE WITNESS: You just said I	21 22	Have you gone and talked to
23	wrote it in my report, so I just	1	him?
	wanted to see where I said it.	23	A. I have not.
24	QUESTIONS BY MR. TISI:	24	MS. MILLER: Objection.
25	Q. Are there not seven	25	MR. LOCKE: Objection.
	Page 359		Page 361
1		1	Page 361 MS. MILLER: Give us time to
1 2	Page 359 observational seven hospital-based studies, Doctor?	1 2	_
	observational seven hospital-based		MS. MILLER: Give us time to
2	observational seven hospital-based studies, Doctor?	2	MS. MILLER: Give us time to object, Doctor. THE WITNESS: Okay. Sorry.
2 3 4	observational seven hospital-based studies, Doctor? A. I have a chart here that has	2 3	MS. MILLER: Give us time to object, Doctor. THE WITNESS: Okay. Sorry. I did my own independent
2 3 4	observational seven hospital-based studies, Doctor? A. I have a chart here that has seven hospital-based case-control studies.	2 3 4	MS. MILLER: Give us time to object, Doctor. THE WITNESS: Okay. Sorry.
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2 3 4 <mark>5</mark> 6 7	observational seven hospital-based studies, Doctor? A. I have a chart here that has seven hospital-based case-control studies. Q. Okay. And one of them we just talked about, it was Rosenblatt, and it was done here at Johns Hopkins, was it not?	2 3 4 5 6 7	MS. MILLER: Give us time to object, Doctor. THE WITNESS: Okay. Sorry. I did my own independent search, and I evaluated the body of medical evidence. QUESTIONS BY MR. TISI:
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	Page 362		Page 364
1	Rosenblatt, again, are we talking about?	1	A an odds ratio of 1
2	Because there are two Rosenblatts.	2	Q. Okay.
3	Q. 1992.	3	A which is null.
4	A. Rosenblatt '92. I got it.	4	Q. And when you have talc, it's
5	Q. And Cramer 1982.	5	1.7, and when you have it directly applied to
6	A. Got it.	6	sanitary napkins, it was 4.8 do you see
7	Q. And I asked you the question,	7	that? which was statistically significant.
8	and you said that they were inconsistent.	8	A. Statistically significant with
9	Well, let's see what Dr. Szklo	9	a confidence interval of 1.3 to 17.8, a very,
10	says about this.	10	very wide range, and with also a proportion
11	Now, just to be clear,	11	of missing of cases and controls with
12	Rosenblatt is a hospital-based case-control	12	missing exposure.
13	study?	13	Q. But then he says something that
14	A. Rosenblatt was a hospital-based	14	addresses your point directly. It says,
15	case-control study, yes, that's correct.	15	"This is" and I'm going to read the whole
16	Q. And Cramer was a	16	paragraph.
17	population-based case-control study?	17	MS. MILLER: Tell us where you
18	A. Cramer 1982 was a	18	are.
19	population-based case-control study.	19	MR. TISI: Yeah. Second
20	Q. Now, first, if you go to the	20	column. It's beginning with "we
21	study itself, if you go to the third page,	21	found" on page 22.
22	page 22.	22	QUESTIONS BY MR. TISI:
23	A. Page 22, yes.	23	Q. "We found an increased relative
24	Q. It says actually, the second	24	risk, 4.8 for talc use on sanitary napkins,
25	column it says, "We found an increased	25	with a smaller effect for genital bath
	Page 363		Page 365
1	relative risk, 4.8, for talc use on sanitary	1	exposure, 1.7."
2	napkins, with a smaller effect on genital	2	And that 1.7 was not
3	bath talc exposure, relative risk 1.7."	3	statistically significant, correct?
4	Do you see that?	4	A. The 1.7 was not statistically
5	A. I do see that.	5	significant.
6	Q. Can you tell me why it is you	6	Q. Okay. He then says, "This is
7	didn't refer to the talc on sanitary napkins'	7	in accordance with the original finding of a
8	relative risk of 4.8, which was statistically	8	significant increased risk for perineal talc
Ω			
9	significant?	9	exposure, relative risk 1.9, 95 percent
10	A. The point estimate that I took	10	confidence interval, 1.3 to 2.9, by Cramer,
10 11	A. The point estimate that I took out of that was for genital tale exposure,	10 11	confidence interval, 1.3 to 2.9, by Cramer, et al."
10 11 12	A. The point estimate that I took out of that was for genital talc exposure, which is a relative risk of 1.70.	10 11 12	confidence interval, 1.3 to 2.9, by Cramer, et al." And that's the Cramer article
10 11 12 13	A. The point estimate that I took out of that was for genital talc exposure, which is a relative risk of 1.70. Q. All right. But genital talc	10 11 12 13	confidence interval, 1.3 to 2.9, by Cramer, et al." And that's the Cramer article from 1982, correct?
10 11 12 13 14	A. The point estimate that I took out of that was for genital talc exposure, which is a relative risk of 1.70. Q. All right. But genital talc exposure was defined as asbestos	10 11 12 13 14	confidence interval, 1.3 to 2.9, by Cramer, et al." And that's the Cramer article from 1982, correct? A. That's what it says.
10 11 12 13 14	A. The point estimate that I took out of that was for genital talc exposure, which is a relative risk of 1.70. Q. All right. But genital talc	10 11 12 13 14 15	confidence interval, 1.3 to 2.9, by Cramer, et al." And that's the Cramer article from 1982, correct? A. That's what it says. Q. Okay. And so he's saying his
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92 (Pages 362 to 365)

	Page 366		Page 368
1	statistical significance, they're not	1	talc fiber exposure may be associated with an
2	consistent.	2	adverse event, but further study is needed."
3	QUESTIONS BY MR. TISI:	3	Do you see that?
4	Q. Okay. Because statistical	4	A. I do, and that's a very, very
5	significance is never the test for	5	general statement. There's a "suggest,"
6	consistency, is it, Doctor?	6	there's a "may," there's an "associated,"
7	And everybody from the	7	there's an "adverse effect." I don't even
8	epidemiology textbooks to the American	8	know what that means.
9	Statistical Association says, don't do what	9	Q. He never said it was
10	you did in this report, true?	10	inconsistent, did he? He said, in fact, his
11	MS. MILLER: Objection.	11	study this study is in accordance with the
12	MR. LOCKE: Objection.	12	original study.
13	THE WITNESS: I don't even know	13	MS. MILLER: Objection.
14	what that means, and I	14	THE WITNESS: This statement
15	QUESTIONS BY MR. TISI:	15	right here is not talking about is
16	Q. Okay.	16	not talking about consistency, this
17	A don't know what you mean by	17	results of our study. I don't know
18	everyone and	18	why that has anything to do with
19	Q. Well, we're going to talk	19	consistency.
20	A who those different groups	20	QUESTIONS BY MR. TISI:
21	are, so you'd have be very specific.	21	Q. Okay. Well, let's go to the
22	Q. We're going to be	22	paragraph that does.
23	A. It's a very big generalization.	23	It says above, "We found an
24	Q. Well, you made a lot of	24	increased, 4.8 for talc use on sanitary
25	generalizations about what the epidemiology	25	napkins, with a smaller effect for genital
	Page 367		D 260
	rage 307		Page 369
1	community thinks.	1	bath talc exposure, relative risk, 1.7. This
1 2		1 2	
	community thinks.		bath talc exposure, relative risk, 1.7. This
2	community thinks. MR. LOCKE: Objection.	2	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of
2	community thinks. MR. LOCKE: Objection. QUESTIONS BY MR. TISI:	2 3	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of a significant increased risk for perineal
2 3 4	community thinks. MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. So I'm talking to you about	2 3 4	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of a significant increased risk for perineal talc exposure by Cramer, et al. Preliminary
2 3 4 5	community thinks. MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. So I'm talking to you about epidemiology textbooks. The American	2 3 4 5	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of a significant increased risk for perineal talc exposure by Cramer, et al. Preliminary findings from a Chinese talc study also
2 3 4 5 6	community thinks. MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. So I'm talking to you about epidemiology textbooks. The American Statistical Association says, you don't do	2 3 4 5 6	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of a significant increased risk for perineal talc exposure by Cramer, et al. Preliminary findings from a Chinese talc study also suggest the application of talc-containing
2 3 4 5 6 7	community thinks. MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. So I'm talking to you about epidemiology textbooks. The American Statistical Association says, you don't do what you did here.	2 3 4 5 6 7	bath talc exposure, relative risk, 1.7. This is in accordance with the original finding of a significant increased risk for perineal talc exposure by Cramer, et al. Preliminary findings from a Chinese talc study also suggest the application of talc-containing dusting powder and the risk of epithelial
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	Page 370		Page 372
1	risk was observed in a nonstatistically	1	statement. It says "suggests," "may,"
2	significant study.	2	"associated adverse effect." I don't even
3	MS. MILLER: Objection.	3	know what the adverse effect he's talking
4	MR. LOCKE: Objection.	4	about is.
5	THE WITNESS: This paragraph	5	Q. Well, how about the last
6	does not say that there's an increased	6	let's talk about the last paragraph.
7	risk in all these studies.	7	"In summary"
8	This paragraph says this	8	MS. MILLER: The last paragraph
9	paragraph highlights that some studies	9	of what
10	are statistically significant and	10	MR. TISI: Of the study.
11	others are nonstatistically	11	MS. MILLER: Oh, okay.
12	significant. And that is not	12	QUESTIONS BY MR. TISI:
13	consistent.	13	Q. "In summary, our study shows
14	QUESTIONS BY MR. TISI:	14	that the development of ovarian cancer may
15	Q. They say these are these	15	be may be associated with genital fiber
16	studies are in accordance, and you're saying	16	exposure, especially talc on sanitary
17	that that's inconsistent?	17	napkins."
18	MS. MILLER: Objection.	18	Do you see that?
19	THE WITNESS: That's not what	19	A. I do.
20	it says.	20	And then it says, "Given its
21	QUESTIONS BY MR. TISI:	21	small sample size and the potential selection
22	Q. It says this study is in	22	bias stemming from including patients in only
23	accordance with the original finding of a	23	one hospital, further research needs to be
24	significant a significant increased risk	24	performed in order to confirm our findings."
25	for perineal talc exposure, true? Does it	25	And that is the importance of
	Page 371		Page 373
1	not say that?	1	consistency. And that first paragraph that
2	A. And what that sentence is	2	you highlighted demonstrates the lack of
3	referring to is the sentence before that,	3	consistency.
4	which is talking about an increased relative	4	Q. Doctor, he's saying that this
5	risk for talc use on sanitary napkins, and	5	study is further support of the hypothesis,
6	that's it. It's not in accordance	6	additional study needs to be done, but that
7	Q. No, that's not true.	7	this shows that the development of ovarian
8	A. It is.	8	cancer may be associated with genital fiber
9	Q. It says with a smaller effect	9	exposure. That's what he says. I'm reading
10	for genital bath talc exposure, relative risk	10	directly from the report.
11	1.7. It includes both, does it not?	11	MR. LOCKE: Objection.
12	A. That relative risk is not	12	THE WITNESS: And where are you
13	statistically significant. If they're	13	reading that?
14	talking about the point estimate being over	14	QUESTIONS BY MR. TISI:
15	1, that may be true, but this paragraph does	15	Q. "In summary, our study shows
16	not say anything about consistency within	16	that the development of ovarian cancer may be
	these studies. In fact, this highlights	17	associated with genital fiber exposure,
17		18	especially tale on sanitary napkins and
18	inconsistency between all of these studies.	1	- · · · · · · · · · · · · · · · · · · ·
18 19	inconsistency between all of these studies. Q. Okay. Well, and so	19	exposure to fibers in relatives."
18	inconsistency between all of these studies. Q. Okay. Well, and so Dr. Moyses Dr. Szklo is wrong when he says	19 20	- · · · · · · · · · · · · · · · · · · ·
18 19	inconsistency between all of these studies. Q. Okay. Well, and so	19 20 21	exposure to fibers in relatives."
18 19 20	inconsistency between all of these studies. Q. Okay. Well, and so Dr. Moyses Dr. Szklo is wrong when he says	19 20 21 22	exposure to fibers in relatives." He does say that, correct?
18 19 20 21	inconsistency between all of these studies. Q. Okay. Well, and so Dr. Moyses Dr. Szklo is wrong when he says this: "The results of our study and others suggest that genital fiber exposure may be associated with an adverse effect."	19 20 21 22 23	exposure to fibers in relatives." He does say that, correct? MS. MILLER: Objection.
18 19 20 21 22	inconsistency between all of these studies. Q. Okay. Well, and so Dr. Moyses Dr. Szklo is wrong when he says this: "The results of our study and others suggest that genital fiber exposure may be	19 20 21 22	exposure to fibers in relatives." He does say that, correct? MS. MILLER: Objection. THE WITNESS: He says, "Our

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	Page 374		Page 376
1	And then he also says and	1	A. Can you just show me? I'm
2	I'll say this again "Given its	2	sorry, I just didn't know where that was.
3	small sample size and the potential	3	Okay.
4	for selection bias"	4	Q. Does it not say, "The result of
5	QUESTIONS BY MR. TISI:	5	the present study do not support the
6	Q. And he doesn't say this is	6	association between talc and ovarian cancer
7	inconsistent, does he? He doesn't say, our	7	but given the overlapping range of the
8	studies are opposite to. He doesn't say, our	8	confidence intervals, they are not
9	studies are inconsistent with, does he?	9	incompatible"?
10	MR. LOCKE: Objection.	10	MR. LOCKE: Objection.
11	MS. MILLER: Objection.	11	THE WITNESS: I do see that
12	THE WITNESS: He doesn't say	12	sentence, but I'm just trying to
13	they're inconsistent. He doesn't say	13	figure out where that that that is
14	either. But they are inconsistent	14	reference to.
15	with each other, because some are	15	QUESTIONS BY MR. TISI:
16	showing a statistical significance and	16	Q. Okay. Was it important to you
17	some are not.	17	to figure out what that doctor meant by that?
18	(Merlo Exhibit 41 marked for	18	The overlapping confidence intervals is
19	identification.)	19	consistency, is it not?
20	QUESTIONS BY MR. TISI:	20	MR. LOCKE: Objection.
21	Q. Let's go to another one.	21	THE WITNESS: I don't know what
22	A. They're inconsistent.	22	you mean by overlapping confidence
23	Q. Let's go to another one.	23	intervals.
24	There's another one that you refer to. It's	24	QUESTIONS BY MR. TISI:
25	the Tzonou study from Greece, the Tzonou	25	Q. If confidence intervals overlap
	•		
	Page 375		Page 377
1	Page 375 study. I'm going to show you this one. This	1	_
1 2		1 2	Page 377 between studies and let's say at 1.2, those are consistent. The confidence
	study. I'm going to show you this one. This	l	between studies and let's say at 1.2,
2	study. I'm going to show you this one. This is one you also read.	2	between studies and let's say at 1.2, those are consistent. The confidence
2	study. I'm going to show you this one. This is one you also read. And this is another	2 3	between studies and let's say at 1.2, those are consistent. The confidence intervals are consistent, correct?
2 3 4	study. I'm going to show you this one. This is one you also read. And this is another hospital-based study, correct?	2 3 4	between studies and let's say at 1.2, those are consistent. The confidence intervals are consistent, correct? MS. MILLER: Objection.
2 3 4 5	study. I'm going to show you this one. This is one you also read. And this is another hospital-based study, correct? And this is the one on your	2 3 4 5	between studies and let's say at 1.2, those are consistent. The confidence intervals are consistent, correct? MS. MILLER: Objection. THE WITNESS: It depends. It depends if you have three, eight, ten
2 3 4 5 6	study. I'm going to show you this one. This is one you also read. And this is another hospital-based study, correct? And this is the one on your chart	2 3 4 5 6	between studies and let's say at 1.2, those are consistent. The confidence intervals are consistent, correct? MS. MILLER: Objection. THE WITNESS: It depends. It depends if you have three, eight, ten studies that show 1.2, 1.3, their
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	Page 378		Page 380
1	overlap.	1	significant for the hospital-based studies,
2	Because the two studies, if	2	correct?
3	we're talking about a consistent set, the	3	A. For that's what that
4	studies would be statistically significant,	4	suggests for those six studies.
5	and that would point towards consistency.	5	Q. Now, Doctor, just while we're
6	Q. I'm going to like to show	6	at it here, and we're going to talk about
7	you have you seen a meta-analysis of the	7	the by the way, you didn't reference that
8	hospital-based studies at all?	8	in your report, did you, that there was a
9	A. I did review some	9	meta-analysis of the hospital-based studies
10	meta-analyses.	10	that showed a statistically significant
11	Q. Did you review the	11	increased risk?
12	meta-analyses of the hospital-based studies?	12	MR. LOCKE: Objection.
13	A. I would have to look back at my	13	THE WITNESS: Can you ask that
14	report and see	14	one more time?
15	Q. Let me see if I can show you	15	QUESTIONS BY MR. TISI:
16	the Berge study.	16	Q. Yes.
17	A which which had the	17	You didn't note that there was
18	hospital-based studies.	18	a meta-analysis of the hospital-based studies
19	Q. Let me show you the Berge	19	in the Berge study that showed a
20	study, which you've actually seen, correct?	20	statistically significant increased risk, did
21	MS. MILLER: Can you show us,	21	you?
22	too?	22	MR. LOCKE: Objection.
23	THE WITNESS: Okay.	23	THE WITNESS: In the
24	(Merlo Exhibit 48 marked for	24	meta-analysis done by Berge, I did not
25	identification.)	25	reference that hospital-based
	Page 379		Page 381
1	QUESTIONS BY MR. TISI:	1	case-control study table right there.
2	Q. If you go to the table on	2	QUESTIONS BY MR. TISI:
3	page 6 of 15.	3	Q. And that showed an increased
4	Do you see they have	4	risk?
5	case-control studies and they have	5	A. I would have to go through and
6	hospital-based control studies?	6	look at the papers that were pulled for that
7	Do you see that?	7	because I have seven on my list, and there's
8	A. I do see that.	8	six there.
9	Q. Okay. See the relative risk of	9	Q. Okay. But, of course, this
10	1.34?	10	study was published and yours wasn't. Your
11	A. I do see 1.34.	11	report has not been?
12	Q. See the confidence interval	12	MR. LOCKE: Objection.
13	greater than 1, 1.16 to 1.51?	13	MS. MILLER: Objection.
14	A. I see 1.16 to 1.51.	14	THE WITNESS: I didn't do a
15	Q. What does that tell you,	15	meta-analysis. I just gave a summary
16	Doctor?	16 17	statement of the available
17	MR. LOCKE: Objection.	18	hospital-based case controls, and
18 19	THE WITNESS: Well, it tells me	19	they're all not statistically significant.
20	that looking at these six case-control	20	QUESTIONS BY MR. TISI:
21	studies, the relative risk in however	21	Q. Right.
22	they lump these together was a 1.34,	22	And but when you combine
23	with a 95 percent confidence interval of 1.16 to 1.5 sorry, 1.51.	23	them, because they were not powered to do it,
24	QUESTIONS BY MR. TISI:	24	they were small studies, because the
25	Q. And that's statistically	25	confidence intervals were large you
	Z. This mais sumstically	ı	

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	Page 382		Page 384
1	indicated that before. When you combine	1	THE WITNESS: And I would have
2	them, you increase the power, right?	2	to go through and see why there's only
3	MR. LOCKE: Objection.	3	six there and see what the measure of
4	MS. MILLER: Objection.	4	risk was and whether or not that was
5	THE WITNESS: You can	5	appropriate to even combine those.
6	QUESTIONS BY MR. TISI:	6	QUESTIONS BY MR. TISI:
7	Q. Okay.	7	Q. Okay. But you didn't do that,
8	A if the studies looked at the	8	and you didn't address this in your report?
9	same thing.	9	MR. LOCKE: Objection.
10	Q. Right.	10	THE WITNESS: So in looking at
11	A. If they looked at the same	11	this table now, I'm looking at the
12	measure of exposure.	12	hospital-based case-control studies,
13	Q. So when they combine them, it	13	and there's six of them, and the
14	increased the power. They show a	14	relative risk is as you say. But
15	statistically significant results in the	15	there is significant heterogeneity
16	Berge study, correct?	16	within the studies, and so it may not
17	MS. MILLER: Objection. He	17	be appropriate to lump all of those
18	specifically said something different.	18	together.
19	MR. TISI: You get to cross.	19	And I believe that the authors
20	THE WITNESS: If, in fact, the	20	concluded that because of
21	studies are measuring the same aspect	21	heterogeneity, it did not support a
22	of the exposure, which there are	22	causal interpretation of the
23	varying measures of exposure with	23	association.
24	in all of the case-control studies, if	24	QUESTIONS BY MR. TISI:
25	they're measuring the same thing, then	25	Q. Doctor, let me ask you this:
	they to measuring the same times, then		
	D 202		
	Page 383		Page 385
1	it does add it does add more study	1	Page 385 It also says at the top and if you look at
1 2		1 2	
	it does add it does add more study		It also says at the top and if you look at
2	it does add it does add more study subjects, which increases it does	2	It also says at the top and if you look at the abstract actually, the and I'll
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	Page 386		Page 388
1	limited to serous carcinoma and suggests	1	QUESTIONS BY MR. TISI:
2	with the suggestion of dose response."	2	Q. The question is whether you did
3	Did I read that correctly?	3	or you didn't.
4	A. You read that correctly.	4	MS. MILLER: Please don't
5	Q. You don't note that in your	5	interrupt the witness.
6	report, do you?	6	MR. TISI: No, he needs to
7	MR. LOCKE: Objection.	7	answer my questions.
8	THE WITNESS: But the authors	8	MS. MILLER: He's answering
9	also say in their concluding sentence,	9	your questions as fully as he can
10	"Several aspects of our study,	10	MR. TISI: My question is, I
11	including heterogeneity of results	11	· · · · · · · · · · · · · · · · · · ·
12	between case-control and cohort	12	know you
			MS. MILLER: And now you're
13	studies, however, do not support a	13	interrupting me.
14	causal interpretation of the	14	MR. TISI: I know you well,
15	association."	15	because you're coaching.
16	QUESTIONS BY MR. TISI:	16	QUESTIONS BY MR. TISI:
17	Q. I understand, Doctor.	17	Q. Doctor, I know you discussed
18	I asked you whether I read the	18	the
19	prior sentence correctly about a dose	19	MR. TISI: Your laughing is
20	response, and you didn't address that in your	20	really, really overwhelming.
21	report, did you not?	21	MS. MILLER: You just accused
22	MR. LOCKE: Objection.	22	me of coaching the witness for saying
23	MS. MILLER: Objection.	23	"please don't interrupt him."
24	THE WITNESS: Well, let's look	24	MR. TISI: You are totally
25	at dose response then.	25	coaching the witness. Don't interrupt
	Page 387		Page 389
1	QUESTIONS BY MR. TISI:	l -	1 77 77 107 71
	QUESTIONS BY MIC. TISE.	1	him. He was saying X, Y and Z. It's
2	Q. Let's look at yeah. You	2	him. He was saying X, Y and Z. It's coaching.
2 3	•	1	
	Q. Let's look at yeah. You	2	coaching.
3	Q. Let's look at yeah. You didn't address it. I looked for it. I didn't find it.	2 3	coaching. MS. MILLER: Excuse me? I
3 4	Q. Let's look at yeah. You didn't address it. I looked for it. I didn't find it. A. The only reason I'm looking at	2 3 4	coaching. MS. MILLER: Excuse me? I said, "Please don't interrupt the witness."
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	Page 390		Page 392
1	that.	1	it'll be.
2	Have you actually seen this?	2	THE WITNESS: I don't know how
3	This because there are two Berge	3	you can say that this that I
4	publications. There was the original and	4	didn't that I looked at this one or
5	there was an amended one. This is the	5	the other one.
6	amended one.	6	MR. TISI: It'll be what it'll
7	Did counsel provide you with	7	be. I will compare the citation, and
8	the amended one?	8	it'll either be the one you looked at
9	A. Counsel didn't provide me with	9	or not. Let's move on.
10	any articles.	10	THE WITNESS: Well, we can
11	Q. Okay.	11	compare it right now.
12	A. I looked them up myself.	12	QUESTIONS BY MR. TISI:
13	Q. Did you find this one?	13	Q. I want to go Doctor
14	A. Again, I don't have these	14	A. I'm going to look to compare it
15	memorized, so I don't know which is the first	15	right now.
16	one or which is the second one.	16	Q. Well, then you can do it off
17	Q. This is the second one.	17	the record. I'm not doing it on the record.
18	MS. MILLER: Is there a	18	A. Well, then you can't say
19	question pending? I'm so sorry, I	19	that that you can just assume that
20	lost it.	20	Q. I'm not
21	MR. TISI: Yes.	21	A I saw the first one and
22	QUESTIONS BY MR. TISI:	22	didn't see the second one.
23	Q. Did you see this have you	23	Q. Doctor, I'll look it up. You
24	will you see the second the second Berge	24	have the citation in the back of your
25	study?	25	references. I'll just look it up.
25	study?	25	references. Th just fook it up.
	Daga 201		
	Page 391		Page 393
1	A. I may have had the second one	1	Page 393 If you go to your chart here,
1 2		1 2	
	A. I may have had the second one		If you go to your chart here,
2	A. I may have had the second one or the first one. I don't know.	2	If you go to your chart here, exhibit that we marked as Exhibit
2 3	A. I may have had the second one or the first one. I don't know. Q. Okay.	2 3	If you go to your chart here, exhibit that we marked as Exhibit Number 37 it's right in front of you,
2 3 4	 A. I may have had the second one or the first one. I don't know. Q. Okay. A. Because it's not 	2 3 4	If you go to your chart here, exhibit that we marked as Exhibit Number 37 it's right in front of you, sir would you agree with me that of all
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Page 394	Page 39
1 Q. Greater than 1.	every one, but they most of them do.
2 Would you look at the	every one, but they most of them do. In fact, even if you look at the cohort studies, with the exception of Gonzalez, they include 1.25. A. Okay. Q. Is that true? A. It looks like it, based on this chart.
3 confidence interval of the ones that have a	the cohort studies, with the exception of
4 greater a point estimate greater than 1?	Gonzalez, they include 1.25.
5 Would you agree that the	A. Okay.
6 confidence intervals overlap for every one of	Q. Is that true?
7 those studies at 1.2?	7 A. It looks like it, based on this
8 MS. MILLER: Objection.	8 chart.
9 THE WITNESS: I would have to	9 Q. Now, I provided Dr. Ballman
use a calculator to do that.	10 have you seen Dr. Ballman's exhibits?
11 QUESTIONS BY MR. TISI:	11 A. Yes.
Q. Well, all you have to do is	12 Q. Okay. I provided her with a
look at the all you have to look at is the	copy of your chart, which I will have mark
confidence interval, right? The confidence	as Exhibit 42. Since you had time to look a
interval? If it overlaps 1.2, then it's	it, I'm going to ask you whether you agree
then they're overlapping, right?	16 with her or not.
17 A. It's not how we use a	17 (Merlo Exhibit 42 marked for
confidence interval, but if that's what if	18 identification.)
that's the number that you want to say, but	19 QUESTIONS BY MR. TISI:
20 that's not how	Q. I asked her to highlight, to
Q. They're all every single one	21 circle, every I asked her to highlight
of these confidence intervals, with the	every in red, in pink, every result that
exception of the three that I just talked	was greater than 1.0, and she did.
about, overlap at 1.2.	Do you see that?
A. For the purpose of this	25 MS. MILLER: Objection.
me to say whether or not there's overlap at	3 what did she highlight?
1.2? Q. Uh-huh. A. And what was the other qualification? Q. None. The vast majority of these confidence intervals overlap at 1.2, true? A. 1.2 is included in many of these. Q. The vast majority in fact every one, with the exception of three that I	4 QUESTIONS BY MR. TISI: 5 Q. Every result that had a risk 6 ratio greater than 1.0, and she highlighted 7 that in pink. 8 A. And you're talking about the 9 point estimate? 10 Q. The point estimate, correct. 11 MR. LOCKE: I'm going to object 12 for the same reasons we did during her 13 deposition. 14 MR. TISI: Okay.
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	Page 398		Page 400
1	disagree with that?	1	she appears to have done what you've
2	MS. MILLER: I'm going to	2	asked her to do
3	object. I don't understand how you	3	QUESTIONS BY MR. TISI:
4	disagree with circling, and also	4	Q. Okay.
5	QUESTIONS BY MR. TISI:	5	A and circled.
6	Q. Do you	6	Q. And if asked to do the same
7	MS. MILLER: this is kind of	7	thing, you would have done the same circling
8	illegible.	8	and the same highlighting?
9	QUESTIONS BY MR. TISI:	9	MR. LOCKE: Objection.
10	Q. Do you agree	10	THE WITNESS: If you asked me
11	MR. TISI: It's very legible to	11	the same questions, it appears that
12	me, Counsel, but you can coach your	12	she followed your directions
13	witness if you'd like. I can read it	13	appropriately.
14	very carefully. Very well.	14	QUESTIONS BY MR. TISI:
15	THE WITNESS: I see circles in	15	
16	the 95 percent confidence interval,	16	Q. Okay. Now, I'm going to show
	± .		you what a textbook. It's already been
17	and if you're asking if those circles	17	marked as Exhibit Number 32.
18	include a range that includes 1.2 in	18	Can you pull that out, please?
19	that 95 percent confidence interval,	19	That's the Rothman textbook.
20	that's what it appears to show.	20	A. 32?
21	QUESTIONS BY MR. TISI:	21	Q. Uh-huh. I have another copy in
22	Q. And then I asked her to	22	case anybody wants it because I don't really
23	highlight in blue those that included 1.25,	23	need paper. You can have it if you'd like.
24	and she did that as well.	24	MS. MILLER: Okay. Instead of
25	Do you see that?	25	making us go through our pile.
1	MP LOCKE: Objection	1	
1	MR. LOCKE: Objection.	1	Thanks.
2	MS. MILLER: Objection.	2	Thanks. MR. TISI: Yeah.
2	MS. MILLER: Objection. THE WITNESS: The blue is a	2 3	Thanks. MR. TISI: Yeah. QUESTIONS BY MR. TISI:
2 3 4	MS. MILLER: Objection. THE WITNESS: The blue is a little bit difficult to make out.	2 3 4	Thanks. MR. TISI: Yeah. QUESTIONS BY MR. TISI: Q. Do you have it in front of you?
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	Page 402		Page 404
1	starts with "one mistake."	1	this instance where there are several
2	Do you see it?	2	different kinds of study designs there's
3	A. I see it now.	3	consistency within study results. There's
4	Q. Okay. "One mistake in	4	consistency within hospital-based
5	implementing the consistency criterion is so	5	case-controls. There's consistency in
6	common it deserves special mention. It is	6	nonsignificant nonsignificant results.
7	sometimes claimed that a literature or set of	7	There's inconsistency in
8	results is inconsistent simply because some	8	population-based case-control studies where
9	results are statistically significant and	9	some showed statistical significance, some
10	some are not. This sort of evaluation is	10	don't. There's also consistency within
11	completely fallacious, even if one accepts	11	cohort studies where there's a consistent
12	the use of statistical the use of	12	nonstatistically significance.
13	significance testing methods."	13	So there's consistency and
14	Did I read that correctly?	14	there's inconsistency. And just to divide it
15	MR. LOCKE: Objection.	15	up simply the way that Dr. Rothman says here
16	MS. MILLER: Objection.	16	is too general because there are very
17	MR. LOCKE: And to the	17	specific instances that need to be considered
18	characterization of this as a	18	before just agreeing or disagreeing to that
19	textbook.	19	statement.
20	THE WITNESS: I see that	20	(Merlo Exhibit 43 marked for
21	statement on this page.	21	identification.)
22	QUESTIONS BY MR. TISI:	22	QUESTIONS BY MR. TISI:
23	Q. You can pull the textbook out	23	Q. Okay. Let me look at Dr
24	so I don't have to, like, deal with that kind	24	what Dr. Oleckno says about it. Here's
25	of objection.	25	Exhibit Number 43, which is also from the
	D 402		
	Page 403		Page 405
1		1	
1 2	MR. LOCKE: Well, it's a	1 2	Oleckno textbook that you referred to in your
2	MR. LOCKE: Well, it's a portion of a book.	2	Oleckno textbook that you referred to in your report.
2	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom.		Oleckno textbook that you referred to in your report. And in the chapter
2 3 4	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI:	2 3	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be
2	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook.	2 3 4	Oleckno textbook that you referred to in your report. And in the chapter
2 3 4 5	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook. That's exactly what you did, right?	2 3 4 5	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be pages 131, 173 and 174 MR. TISI: Correct.
2 3 4 5 6	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook. That's exactly what you did, right? A. I'm sorry?	2 3 4 5 6	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be pages 131, 173 and 174 MR. TISI: Correct. MS. MILLER: so I'm going to
2 3 4 5 6 7	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook. That's exactly what you did, right?	2 3 4 5 6 7	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be pages 131, 173 and 174 MR. TISI: Correct.
2 3 4 5 6 7 8	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook. That's exactly what you did, right? A. I'm sorry? Q. Do you agree with that	2 3 4 5 6 7 8	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be pages 131, 173 and 174 MR. TISI: Correct. MS. MILLER: so I'm going to have the same objection.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. LOCKE: Well, it's a portion of a book. MR. TISI: Okay. Okay, Tom. QUESTIONS BY MR. TISI: Q. The chapter in a textbook. That's exactly what you did, right? A. I'm sorry? Q. Do you agree with that statement? A. Do I agree with the statement? Q. "One mistake in implementing the consistency criterion is so common that it deserves special attention. It is sometimes claimed that a literature or set of results is inconsistent simply because some results are statistically significant and some are not. That sort of evaluation is completely fallacious, even if one accepts the use of significance testing methods." Did I read that correctly? A. Yes, you did. Q. Do you agree with that? A. I would say it depends, and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Oleckno textbook that you referred to in your report. And in the chapter MS. MILLER: This appears to be pages 131, 173 and 174 MR. TISI: Correct. MS. MILLER: so I'm going to have the same objection. MR. TISI: Fine. MS. MILLER: This just pulls things out of context rather than including an inherent thing. I don't know MR. TISI: I know you don't know. MS. MILLER: what's between pages 131 MR. TISI: I know you don't know, Counsel. MS. MILLER: and 173 MR. TISI: Objection. MS. MILLER: and what occurs after page 175.

102 (Pages 402 to 405)

	Page 406		Page 408
1	favor?	1	A. I do see where that's said.
2	MR. TISI: Yeah.	2	Q. And that's correct, right?
3	THE WITNESS: Can we take a	3	A. That's correct.
4	little I just need to use the	4	Q. All right. "Conversely, P
5	restroom.	5	greater than .05 indicates that the observed
6	MR. TISI: Absolutely.	6	measure of association is probably due to
7	THE WITNESS: Would that be	7	chance alone and hence not statistically
8	okay?	8	significant."
9	MR. TISI: Absolutely.	9	Correct? Do you see that?
10	THE WITNESS: All right.	10	A. I do see that, correct.
11	Thanks.	11	Q. Okay. "Statistical
12	VIDEOGRAPHER: The time is	12	significance does not indicate the strength
13	4:20 p.m., and we're going off the	13	of an association, nor does it reveal its
14	record.	14	practical significance. For a number of
15	(Off the record at 4:20 p.m.)	15	reasons, most epidemiologists prefer to use
16	VIDEOGRAPHER: The time is	16	confidence intervals rather than
17	4:32 p.m., and we are back on the	17	significant significance testing. For one
18	record.	18	thing, these provide more information than
19	QUESTIONS BY MR. TISI:	19	significance testing."
20	Q. If you go to page 174 of	20	Do you see that?
21	Exhibit 43, the Oleckno textbook, there's a	21	A. I do.
22	bullet point talking about statistical	22	Q. And do you agree with that?
23	significance. I gave it to you as the last	23	A. So there's a lot of statements
24	document we gave you.	24	there.
25	A. Sorry, it was not in front of	25	Q. The last sentence, the last two
	<u> </u>		
	D 40F	l	
	Page 407		Page 409
1	me. I got it.	1	Page 409 sentences I'm talking about.
1 2		1 2	sentences I'm talking about. A. "For a number of reasons, most
	me. I got it. Q. Okay. Go to page 174. A. This is a four-page summary of		sentences I'm talking about.
2	me. I got it. Q. Okay. Go to page 174.	2	sentences I'm talking about. A. "For a number of reasons, most epidemiologists prefer to use confidence intervals rather than significance testing.
2 3 4 5	me. I got it. Q. Okay. Go to page 174. A. This is a four-page summary of the textbook? Q. No, it's not a four-page	2 3	sentences I'm talking about. A. "For a number of reasons, most epidemiologists prefer to use confidence intervals rather than significance testing. For one thing, these provide more information
2 3 4	me. I got it. Q. Okay. Go to page 174. A. This is a four-page summary of the textbook? Q. No, it's not a four-page summary of the textbook, Doctor. It is a	2 3 4	sentences I'm talking about. A. "For a number of reasons, most epidemiologists prefer to use confidence intervals rather than significance testing.
2 3 4 5 6 7	me. I got it. Q. Okay. Go to page 174. A. This is a four-page summary of the textbook? Q. No, it's not a four-page summary of the textbook, Doctor. It is a page out of the textbook where he bullet	2 3 4 5	sentences I'm talking about. A. "For a number of reasons, most epidemiologists prefer to use confidence intervals rather than significance testing. For one thing, these provide more information than statistic significant testing." So it's an that's an
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I	Page 410		Page 412
1	that means your measurement is really good or	1	QUESTIONS BY MR. TISI:
2	your study sample is really, really big.	2	Q. So underneath on page 2, it
3	But you're not going to have a	3	says, "Pervasive problem." And you
4	statistically significant result if the	4	understand the American Statistical
5	confidence interval crosses 1. It will be	5	Association published 42 articles in one
6	statistically insignificant.	6	journal relating to this issue?
7	So dividing these things up is	7	A. I have no idea what the
8	not how this is meant to mean. What this	8	American association what was it called?
9	means is that the confidence interval just	9	Q. Statistical association?
10	gives you a little bit more information, but	10	A. The American Statistical
11	they're not any different than each other.	11	Association, that's not something I follow,
12	It's the same thing.	12	so it's not I would have no idea whether
13	(Merlo Exhibit 44 marked for	13	they published 42 articles or
14	identification.)	14	Q. That's a good point.
15	QUESTIONS BY MR. TISI:	15	What epidemiology journals do
16	Q. All right. Doctor, I'm going	16	you actually get? You mentioned the American
17	to show you what the American Statistical	17	Epidemiology the American Epidemiology.
18	Association says about this issue. I'm	18	Any others that you get?
19	attaching this as Exhibit Number 44.	19	A. So I don't subscribe to
20	I assume you've seen if you	20	journals because we all we get them
21	read Dr. Ballman's testimony, because I think	21	through our Welch Library. We have access to
22	it came out a couple of days before her	22	pretty much every journal available. And so
23	testimony.	23	there are a number of epidemiologic journals
24	A. Okay.	24	within the Welch Library that I have access
25	Q. I assume you've read this, sir?	25	to.
	Page 411		Page 413
1	A. I have looked this over, yes.	1	Q. Which ones do you get? Which
2	Q. It says under the section it	2	one do you look at?
3	says, "Retire Statistical Significance."	3	A. It would depend on the
4	That's the title of the of the article.	4	situation. It would depend on the
5	Retire?	5	investigation that I'm undertaking.
6		1	
	A. I don't have that, actually. I	6	Q. Okay. Do you know who Sander
7	have "Sciences Rise Up Against Statistical	6 7	Q. Okay. Do you know who Sander Greenland is?
7 8	have "Sciences Rise Up Against Statistical Significance."	6 7 8	Q. Okay. Do you know who Sander Greenland is? A. I do not.
7 8 9	have "Sciences Rise Up Against Statistical Significance." Q. All right. Well, okay. I have	6 7 8 9	Q. Okay. Do you know who SanderGreenland is?A. I do not.Q. Okay. So on page 2 of this
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7 8 9 10 11	have "Sciences Rise Up Against Statistical Significance." Q. All right. Well, okay. I have a different version. MS. MILLER: Retire is nature.	6 7 8 9 10 11	 Q. Okay. Do you know who Sander Greenland is? A. I do not. Q. Okay. So on page 2 of this document, it says, "Let's be clear about what must stop. We should never conclude that
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	Page 414		Page 416
1	depend, and the reason why I say it's going	1	it depends, because it depends on the study
2	to depend is because two studies may be	2	design. It depends on whether the
3	inherently different. One study may have a	3	researchers decided to set up their study
4	very good study design and one study may have	4	well and properly control for bias, properly
5	a poor design. One study may adjust for bias	5	adjust for potential for confounding, analyze
6	and confounding; one study may not.	6	the results correctly. So all of those
7	And this is a very, very	7	factors have to have to come into balance.
8	generalized statement that can either be	8	And the interesting thing about
9	agreed or disagreed with because of those.	9	this paper is it's published in the Journal
10	Q. Okay. Doctor, I'm going to	10	of General Internal Medicine. And if he's an
11	show you a can you please take out the	11	epidemiologist and has these very important
12	article about misconceptions again, the	12	misconceptions that he's trying to bring
13	Rothman review which I you Exhibit	13	forward in the epidemiology community, I'm
14	Number 28?	14	not sure why this wasn't published in an
15	A. Exhibit 28?	15	epidemiology journal.
16	Q. Uh-huh.	16	Q. Actually, in all fairness,
17	A. Okay. I have it.	17	Doctor, I could have chosen dozens of
18	Q. Misconception number 6, 1063.	18	articles where Dr. Rothman makes the same,
19	Can you read it for the record, please?	19	including in his textbook. He has been very
20	A. Misconception which one?	20	adamant about this. So, I mean, you may not
21	Q. 6.	21	understand it, but he has written about this
22	A. 6. Okay.	22	a lot.
23	"Misconception 6. Significant	23	So let me you made a
24	testing is useful and important for the	24	comment
25	interpretation of data."	25	MS. MILLER: We're going to
	Page 415		Page 417
1	Page 415 Q. And does it also say that on	1	Page 417 have to object to that speech and move
1 2		1 2	
	Q. And does it also say that on	1	have to object to that speech and move
2	Q. And does it also say that on the second column, second paragraph,	2	have to object to that speech and move to strike that speech for the record.
2 3	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification	2 3	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI:
2 3 4	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may	2 3 4	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I
2 3 4 5 6 7	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where	2 3 4 5	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't
2 3 4 5 6	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author"	2 3 4 5 6	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion
2 3 4 5 6 7	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph.	2 3 4 5 6 7	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do
2 3 4 5 6 7 8 9	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph. A. Thank you.	2 3 4 5 6 7 8 9	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do you understand it?
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2 3 4 5 6 7 8 9 10 11	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph. A. Thank you. Q. On the right-hand side. A. I see it.	2 3 4 5 6 7 8 9 10 11	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do you understand it? A. Understand what? MS. MILLER: Objection.
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2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph. A. Thank you. Q. On the right-hand side. A. I see it. Q. "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the authors fallaciously interpret lack of statistical significance or imply lack of effect or weak effects may be incorrectly interpreted as important because they are statistically significant." Do you see that? A. I do see that.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do you understand it? A. Understand what? MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. I don't understand what your question is. MS. SHARKO: You don't have to respond to the speeches, Doctor. MS. MILLER: Yeah, just let it go. QUESTIONS BY MR. TISI: Q. Doctor, if you go to the conclusion in this thing, he says he makes the following statement: "It is easy to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph. A. Thank you. Q. On the right-hand side. A. I see it. Q. "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the authors fallaciously interpret lack of statistical significance or imply lack of effect or weak effects may be incorrectly interpreted as important because they are statistically significant." Do you see that? A. I do see that. Q. Do you agree with that?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do you understand it? A. Understand what? MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. I don't understand what your question is. MS. SHARKO: You don't have to respond to the speeches, Doctor. MS. MILLER: Yeah, just let it go. QUESTIONS BY MR. TISI: Q. Doctor, if you go to the conclusion in this thing, he says he makes the following statement: "It is easy to declare that the result is not statistically
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. And does it also say that on the second column, second paragraph, "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the author" A. I'm sorry to interrupt. Where are you? Q. Second paragraph. A. Thank you. Q. On the right-hand side. A. I see it. Q. "Significant tests are a poor classification scheme for study results. Strong effects may be incorrectly interpreted as null findings because the authors fallaciously interpret lack of statistical significance or imply lack of effect or weak effects may be incorrectly interpreted as important because they are statistically significant." Do you see that? A. I do see that.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	have to object to that speech and move to strike that speech for the record. QUESTIONS BY MR. TISI: Q. You made a comment, and I really have to push back on it. Let's go to the conclusion A. Are you asking me if I don't understand it? Q. Do you not do you not do you understand it? A. Understand what? MS. MILLER: Objection. QUESTIONS BY MR. TISI: Q. I don't understand what your question is. MS. SHARKO: You don't have to respond to the speeches, Doctor. MS. MILLER: Yeah, just let it go. QUESTIONS BY MR. TISI: Q. Doctor, if you go to the conclusion in this thing, he says he makes the following statement: "It is easy to

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	Page 418		Page 420
1	no indication of an association, rather than	1	A. Mucinous. Which ones?
2	considering it the quantitative	2	Mucinous, invasive mucinous, borderline?
3	quantitatively the range of associations that	3	Q. Uh-huh.
4	the data actually support."	4	A. Yeah, with much a much lower
5	Do you see that?	5	number of studies that looked at that.
6	A. I do see that sentence.	6	Q. Would any bias or recall bias
7	Q. Okay. And what he's talking	7	or confounding have what would that
8	about, the range of associations, is	8	what would explain that there would be a
9	expressed by the confidence interval; is that	9	difference between serous tumors and
10	correct?	10	nonserous tumors?
11	A. I don't know what he's	11	Because I assume there would be
12	referring to there.	12	no reason for a woman to recall exposure to
13	Q. Okay.	13	one and not the other.
14	A. But if he's talking about a	14	MS. MILLER: Objection.
15	nonstatistically significant result, then the	15	Mischaracterizes this table, among
16	confidence interval will include 1.	16	other problems.
17	(Merlo Exhibit 21 marked for	17	THE WITNESS: I'm not sure what
18	identification.)	18	you're asking.
19	QUESTIONS BY MR. TISI:	19	QUESTIONS BY MR. TISI:
20	Q. Okay. Doctor, I want to go	20	Q. Okay. Let's go on.
21	back for a moment to the we were talking	21	On the qualitative data
22	about the hospital-based studies and the	22	synthesis on page on the right-hand
23	heterogeneity, and we talked about Berge, and	23	column, at the bottom of the second paragraph
24	I want to talk about Penninkilampi for a	24	it says, "The only outcome" it talks about
25	moment.	25	the three cohort studies.
	Page 419		Page 421
1	I'll show the Penninkilampi	1	"The only outcome reported in
2	study which you reviewed in your report.	2	all three studies was any perineal talc use,
3	A. Thank you.	3	hence the available data from prospective
4	Q. And that's exhibit number	4	studies was limited."
5	Exhibit Number 21.	5	Do you see that?
6	You've seen this study before?	6	A. Can you point me to where
7	A. Yes, I have.	7	you're reading?
8	Q. First of all, I'm going like	8	Q. (Indicating.)
9	you to go to page 200 to page 44, please.	9	MS. MILLER: So it's the third
10	It's the one with the table on it.	10	to the last paragraph, the last
11	A. 44, yes.	11	sentence? Is that where you are?
12	Q. Now, it showed on the	12	MR. TISI: It's the second
13	Table 1 it shows serous invasive and serous	13	paragraph on the right-hand side.
14	borderline tumors having a statistically	14	THE WITNESS: The last sentence
15	significant elevated risk of 1.32 and 1.39	15	of the second paragraph?
16	respectively, correct?	16	QUESTIONS BY MR. TISI:
17	A. Serous invasive, serous	17	Q. The last sentence.
18	borderline, 1.32, 1.39.	18	"The only outcome reported in
19	Q. Okay. And this is a	19	all three core studies was any perineal talc
	meta-analysis, true?	20	use." And that would be irrespective of
20			duration, frequency, et cetera, right?
21	A. This is a meta-analysis.	21	
21 22	A. This is a meta-analysis.Q. Okay. Now it does not show the	22	A. That would refer to any
21 22 23	A. This is a meta-analysis. Q. Okay. Now it does not show the same for mucinous, mucinous invasive, et	22 23	A. That would refer to any perineal talc use if they're combined
21 22 23 24	A. This is a meta-analysis. Q. Okay. Now it does not show the same for mucinous, mucinous invasive, et cetera, right? It shows that they're not	22 23 24	A. That would refer to any perineal talc use if they're combined together.
21 22 23	A. This is a meta-analysis. Q. Okay. Now it does not show the same for mucinous, mucinous invasive, et	22 23	A. That would refer to any perineal talc use if they're combined

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	Page 422		Page 424
1	And there so he indicated	1	interval of 1.01 to 1.55, heterogeneity, .33.
2	that the available data from the prospective	2	Do you see that?
3	studies, meaning the cohort studies, was	3	A. Which line is that?
4	limited, true? It's what he says?	4	Q. Under Types of Ovarian Cancer,
5	A. In combining them it's limited,	5	Doctor. Right here.
6	because the cohort studies may have not	6	A. I see that.
7	collected the same data about talc exposure.	7	Q. Let's read what he says in
8	Q. Okay. It also says, "A	8	conclusion. The conclusion that
9	subgroup analysis related to study population	9	Dr. Penninkilampi reaches when he did his
10	setting, i.e., hospitals or general	10	meta-analysis says and this is
11	population, was performed for any perineal	11	January 2018. "The results of this review
12	use application."	12	indicate that perineal tale is associated
13	Do you see that?	13	with a 24 to 39 percent increased risk of
14	A. Yes, I do.	14	ovarian cancer. While the case-control
15	Q. And the conclusion was, "There	15	studies are prone to recall bias, especially
16	was no difference between the pooled results	16	with intense media attention following the
17	for hospital-based and population studies,	17	commencement of a litigation in 2014, the
18	OR, 1.22 versus 1.33 respectively."	18	confirmation of an association in cohort
19	Do you see that?	19	studies between perineal talc use and serous
20	A. I do see that sentence, but I	20	ovarian cancer is suggestive of a causal
21	need see what that's referring to, what table	21	association."
22	and where that's coming from.	22	Do you see that?
23	Q. Well, have you reviewed this	23	A. I do see that; however,
24	before?	24	Penninkilampi
25	A. I have. I just haven't	25	Q. I didn't ask you a question. I
	<u> </u>		
	Page 423		Page 425
1	Page 423 memorized it. There's a lot of papers out	1	Page 425
2		1 2	
	memorized it. There's a lot of papers out there. Q. Okay.	l	just asked
2 3 4	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that	2 3 4	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no
2 3 4 5	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that sentence is referring to.	2 3 4 5	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no association between serous.
2 3 4 5 6	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that sentence is referring to. Q. Okay. Then it goes on to say,	2 3 4 5 6	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no association between serous. Q. I just asked you if you saw it.
2 3 4 5 6 7	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that sentence is referring to. Q. Okay. Then it goes on to say, "There was heterogeneity in the analysis for	2 3 4 5 6 7	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no association between serous.
2 3 4 5 6 7 8	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that sentence is referring to. Q. Okay. Then it goes on to say, "There was heterogeneity in the analysis for non-perineal applications of talc. There was	2 3 4 5 6 7 8	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no association between serous. Q. I just asked you if you saw it. I'm going to ask you a follow-up question. Okay?
2 3 4 5 6 7 8 9	memorized it. There's a lot of papers out there. Q. Okay. A. And I don't know what that sentence is referring to. Q. Okay. Then it goes on to say, "There was heterogeneity in the analysis for non-perineal applications of talc. There was no heterogeneity for any other outcome	2 3 4 5 6 7 8	just asked A. Well, I need to qualify this because Penninkilampi left out the left out Gates, and in Gates there was no association between serous. Q. I just asked you if you saw it. I'm going to ask you a follow-up question. Okay? Did you see it?
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1	numbers.	1	just wanted to make sure we were on
2	So I'm not agreeing or	2	the same page.
3	disagreeing with the statement. I'm	3	MR. TISI: I don't know why you
4	disagreeing with the methodology that	4	need to confirm that, but, okay, fine,
5	led to that statement.	5	I changed the question.
6	QUESTIONS BY MR. TISI:	6	THE WITNESS: So there are six
7	Q. Now, you would agree with me	7	meta-analyses that I reviewed, and
8	that this article was peer-reviewed and	8	again, it depends on what we're
9	published, right?	9	looking at here.
10	A. I don't know. I don't know	10	There's a meta-analysis from
11	I'm not I don't serve on the review	11	1995 which done by Gross which may
12	committee for Epidemiology. I don't know	12	not have the same quality that
13	what their practices are. I can only speak	13	meta-analyses done later because we
14	to the journals that I review for and whether	14	learned how to do meta-analyses over
15	or not those are peer-reviewed.	15	time.
16	Q. Doctor, isn't it true that	16	But also have to remember that
17	every meta-analysis done in this case shows	17	some of these meta-analyses broke
18	between a 25 and 40 percent increased	18	things down by type of study, design,
19	statistically significant increased risk of	19	case-control versus cohort study, and
20	ovarian cancer?	20	even broke it down even further,
21	MS. MILLER: Objection.	21	breaking down the case-control studies
22	QUESTIONS BY MR. TISI:	22	into hospital-based versus
23	Q. Every published and even	23	population-based.
24	unpublished meta-analysis shows that risk?	24	And it's inappropriate to lump
25	MR. LOCKE: Objection.	25	them all together, because they're
	Page 427		Page 429
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1	MS. MILLER: Objection.	1	different study designs.
1 2	MS. MILLER: Objection. THE WITNESS: We'd have to go	1 2	
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	Page 430		Page 432
1	published in peer-reviewed journals, right?	1	literature out there and based on the
2	MR. LOCKE: Objection.	2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
3	THE WITNESS: I don't know.	3	13, 14, 15, 16, 17 articles that may
4		4	have sorry yeah, about that. I
5	QUESTIONS BY MR. TISI:	5	mean, I haven't tallied them up, but a
6	Q. You don't know	6	bunch have attempted to look at dose
7	A. I don't know if these are all	7	response, and that dose response is
8	peer-reviewed journals.	8	just not there.
9	Q. All right. Let's talk about	9	QUESTIONS BY MR. TISI:
10	dose response. That's the one of the Hill	10	Q. First of all, is dose response
11	aspects, and you spent some time talking	11	required for Bradford Hill?
12	about that. And you discuss it on page 32 of	12	MS. MILLER: Objection.
13	your report.	13	THE WITNESS: Again, if we
14	Do you see that, sir?	14	if we go back to Bradford Hill,
15	A. I do see where I talk about	15	Bradford Hill has considerations, and
16	dose response in my report.	16	those nine considerations oftentimes
17	Q. And you claim on page 45 when	17	run into each other.
18	you're criticizing plaintiffs' experts that	18	Does one or another outweigh
19	plaintiffs' experts claim there was dose	19	the other? They're usually used in
20	response when none exists, right?	20	combination.
21	MR. LOCKE: Objection.	21	QUESTIONS BY MR. TISI:
22	QUESTIONS BY MR. TISI:	22	Q. Okay.
23	Q. It's on page 45.	23	A. Is one of them required and an
24	A. I thought we were on page 32.	24	absolute? They're considerations that in
25	Q. I said, you talk about your	25	used in combination can help provide
	Page 431		Page 433
1	opinions on lack of dose response, and you	1	information on the causal pathway.
2	criticize plaintiffs' experts who claim there	2	Q. And it is often true with
3	is dose response when none exist.	3	exposures as opposed to drugs that it is
4	A. So on page 32, they're not my	4	difficult to measure exposure, true?
5	opinions; that's what's found in the medical	5	We talked about smoking. We
6	literature.	6	talked about asbestos. We've talked about
7	Q. I got it. I hear you, Doctor.	7	pollution. We've talked about benzene.
8	I'm saying your two parts of	8	We've talked about all different kinds of
9	your discussion, you point out dose response	9	exposure.
10	on page 32, and that's your interpretation of	10	It is often difficult to know
11	the studies, and your criticisms of the	11	exactly how much a person gets, true?
12	plaintiffs' experts appear on page 45.	12	MS. MILLER: Objection.
13	MS. MILLER: Objection.	13	THE WITNESS: It depends. I
14	THE WITNESS: On page 45, I	14	mean, that's a very general statement.
15	talk about where there is no dose	15	I think if we're if you have an
16	response, and that would be my	16	accurate way of measuring something,
17	opinion.	17	then it's easier. If you don't,
18	QUESTIONS BY MR. TISI:	18	then
19	Q. Right. And that plaintiffs are	19	QUESTIONS BY MR. TISI:
20	just flat out wrong, plaintiffs' experts?	20	Q. Let's take cigarettes.
	MR. LOCKE: Objection.	21	A it's more difficult.
21		1 00	0 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
21 22	THE WITNESS: I didn't say	22	Q. Let's take cigarettes. We use
	I'm not saying plain out, flat out	23	Q. Let's take cigarettes. We use pack years, right?
22 23 24	I'm not saying plain out, flat out wrong. What I'm saying is, my	23 24	
22 23	I'm not saying plain out, flat out	23	pack years, right?

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	Page 434		Page 436
1	duration	1	Is it difficult to measure dose
2		2	
3			with exposures like this that are not drugs,
	1	3	for example?
4		4	MS. MILLER: Objection.
5	person actually gets, how much they actually	5	THE WITNESS: And I'll say it
6	take into their lungs, whether they complete	6	depends. If there is a reliable
7	the whole cigarette, whether they go halfway	7	measure of if there's a reliable
8	and then put it out, whether they just puff	8	method of measuring something
9	on it. You don't really know how much they	9	because we're talking in generalities.
10	actually get, right?	10	If there's a reliable measure, then
11	MS. MILLER: Objection.	11	it's easier.
12	MR. LOCKE: Objection.	12	QUESTIONS BY MR. TISI:
13	THE WITNESS: Actually, I	13	Q. What's the best way to measure
14	haven't reviewed the literature on	14	talc exposure?
15	this, and there may be studies out	15	MS. MILLER: Objection.
16	there that I'm just not aware of. And	16	THE WITNESS: Measuring talc
17	there may be studies that have looked	17	exposure is would be very difficult
18	at how much deposition goes into the	18	to measure because of many, many
19	lungs.	19	factors.
20	We have studies looking at	20	QUESTIONS BY MR. TISI:
21	inhalational antibiotics, and we've	21	Q. Okay. And have you seen where
22	studied actually how much gets into	22	articles attempted to figure out a way to do
23	the lungs. I'd have to read	23	that?
24	literature on	24	MS. MILLER: Objection.
25		25	THE WITNESS: What kind of
	Page 435		Page 437
			rage 43/
1		-	
	QUESTIONS BY MR. TISI:	1	articles are you referring to?
2	Q. Well, those would be clinical	2	QUESTIONS BY MR. TISI:
2 3	Q. Well, those would be clinical trials, would they not be? Because you could	2 3	QUESTIONS BY MR. TISI: Q. The epidemiology studies, never
2 3 4	Q. Well, those would be clinical trials, would they not be? Because you could measure that because you're in a controlled	2 3 4	QUESTIONS BY MR. TISI: Q. The epidemiology studies, never versus ever, breaking it down by weeks, days,
2 3 4 5	Q. Well, those would be clinical trials, would they not be? Because you could measure that because you're in a controlled environment, right?	2 3 4 5	QUESTIONS BY MR. TISI: Q. The epidemiology studies, never versus ever, breaking it down by weeks, days, months, years, et cetera.
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	Page 438		Page 440
1	And that's actually more	1	off the record for this.
2	important than frequency and duration	2	MR. TISI: Given the way your
3	because we have no idea what even goes	3	experts have filed things with Health
4	into that frequency and duration.	4	Canada, with Dr. Nicholson, not
5	(Merlo Exhibit 30 marked for		
6	identification.)	5 6	identifying who she was when she was
7			writing for the Cosmetic Association
	QUESTIONS BY MR. TISI:	7	of Canada, I don't think you get to
8	Q. I'm going to show you what I	8	talk.
9	have marked as Exhibit Number 30, which is an	9	MS. SHARKO: I think your
10	meta-analysis by Taher. It's not been	10	comments are totally off base. You
11	published yet, but it is the draft that we	11	asked me why we laughed.
12	have that's been commissioned by Health	12	MR. TISI: It's not even
13	Canada.	13	appropriate to laugh. Even if you
14	You've seen this before, right?	14	thought it was funny, it's not
15	A. I've seen Taher. I'm not aware	15	appropriate.
16	that it's commissioned by Health Canada.	16	QUESTIONS BY MR. TISI:
17	Q. I'll represent to you that it	17	Q. Doctor
18	is.	18	MS. SHARKO: Well, then don't
19	When did you see this study for	19	make the obnoxious comments.
20	the first time?	20	MR. TISI: You don't think
21	A. I don't recall. Sometime after	21	laughing is obnoxious?
22	December.	22	QUESTIONS BY MR. TISI:
23	Q. So if you look at if you	23	Q. On page 26, the summary of
24	look at the conclusion on the one that says	24	evidence on biologic gradient exposure
25	page 49 on the bottom, P2.00344.9, it says,	25	response.
	Page 439		Page 441
1		1	
1	source of funding. "This work was supported	1	A. 26?
2	source of funding. "This work was supported by Health Canada."	2	A. 26? Q. There's a chart.
2 3	source of funding. "This work was supported by Health Canada." Do you see that?	2	A. 26?Q. There's a chart.A. I see it.
2 3 4	source of funding. "This work was supported by Health Canada." Do you see that? A. I do. "This work was supported	2 3 4	A. 26?Q. There's a chart.A. I see it.Q. Okay? It discusses it
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2 3 4 5 6	source of funding. "This work was supported by Health Canada." Do you see that? A. I do. "This work was supported by Health Canada." Q. Do you think Health Canada is	2 3 4 5 6	 A. 26? Q. There's a chart. A. I see it. Q. Okay? It discusses it summarizes the evidence on biologic gradient. It says, "About half of the epidemiologic
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	24	THE WITNESS. It says that if	4	exposure group, ronowed by 10 to 20, then
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	Page 446		Page 448
1	A. So	1	genital talc use and ovarian cancer, which
2	MR. LOCKE: Is there a	2	appears to be limited to serous carcinoma
3	question?	3	with suggestion of dose response."
4	MR. TISI: Yes. That's the	4	Is that
5	section I was referring to.	5	MS. MILLER: So you've got the
6	QUESTIONS BY MR. TISI:	6	ellipses leaving out the "which
7	Q. Isn't that what they found?	7	appears to be limited to serous
8	A. That's what they say.	8	carcinoma"?
9	(Merlo Exhibit 46 marked for	9	MR. TISI: I'm reading it from
10	identification.)	10	the study, Doctor.
11	QUESTIONS BY MR. TISI:	11	QUESTIONS BY MR. TISI:
12	Q. Okay. Let me show you Exhibit	12	Q. Am I reading that correctly, if
13	Number 46, which is a compilation exhibit	13	you look at it?
14	that I pulled together, and I tabbed it for	14	MR. LOCKE: Objection. Asked
15	you with the actual articles. And you can	15	and answered.
16	check my quotations from it.	16	THE WITNESS: You're reading
17	MS. MILLER: I'm going to	17	the abstract.
18	object to this exhibit, of course.	18	QUESTIONS BY MR. TISI:
19	MR. TISI: Of course you are.	19	Q. Yes. Is that correct.
20	MS. MILLER: Because you once	20	I'm just asking you, Doctor,
21	again just pulled random sentences out	21	whether it says that.
22	of studies	22	A. And I said that's what it says
23	MR. TISI: Okay.	23	in the abstract, and I'm looking for where
24	MS. MILLER: that do not	24	that is actually represented in the in the
25	account for the entire body of	25	article.
	Page 447		Page 449
	rage 117		Page 449
1	statements within the studies.	1	Q. And in number 2 it says on
1 2		1 2	
	statements within the studies.		Q. And in number 2 it says on
2	statements within the studies. MR. TISI: Okay.	2	Q. And in number 2 it says on the Schildkraut study it has a quote, and
2 3	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI:	2 3	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And
2 3 4 5 6	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I	2 3 4	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page
2 3 4 5	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I have the Berge studies we talked about	2 3 4 5	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page A. But if I could just say,
2 3 4 5 6	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I have the Berge studies we talked about before. And you saw the statement, "The	2 3 4 5 6	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page A. But if I could just say, because I did find this Table 3 right now,
2 3 4 5 6 7 8 9	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I have the Berge studies we talked about before. And you saw the statement, "The meta-analysis results in a weak but	2 3 4 5 6 7 8 9	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page A. But if I could just say, because I did find this Table 3 right now, looks at duration and frequency. Q. Uh-huh. A. And the number of risk
2 3 4 5 6 7 8 9	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I have the Berge studies we talked about before. And you saw the statement, "The meta-analysis results in a weak but statistically significant association between genital use of talc and ovarian cancer which appears to be limited to serous with a	2 3 4 5 6 7 8 9	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page A. But if I could just say, because I did find this Table 3 right now, looks at duration and frequency. Q. Uh-huh. A. And the number of risk estimates are 12 and the relative risk 1.16,
2 3 4 5 6 7 8 9 10	statements within the studies. MR. TISI: Okay. QUESTIONS BY MR. TISI: Q. Now, Doctor, if you look, I have the Berge studies we talked about before. And you saw the statement, "The meta-analysis results in a weak but statistically significant association between genital use of talc and ovarian cancer which appears to be limited to serous with a suggestion of dose response."	2 3 4 5 6 7 8 9 10	Q. And in number 2 it says on the Schildkraut study it has a quote, and let's turn to the Schildkraut study. And that's number 2. And if you go to page A. But if I could just say, because I did find this Table 3 right now, looks at duration and frequency. Q. Uh-huh. A. And the number of risk estimates are 12 and the relative risk 1.16, with a 95 percent confidence interval, 1.07
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113 (Pages 446 to 449)

		1	
	Page 450		Page 452
1	Schildkraut author say on page and then if	1	dose response?
2	you look at number 2, which is the second	2	Do you see that?
3	article attached on page 1416, the second	3	MR. LOCKE: Objection.
4	left-hand side, second to last paragraph,	4	QUESTIONS BY MR. TISI:
5	second sentence, it says, "The dose response	5	Q. Does it not say that, Doctor?
6	observed for duration of genital powder use	6	Do you see where I'm at,
7	provides further evidence of the relationship	7	Doctor?
8	between genital powder and overall EOC risk."	8	A. I do.
9	Do you see that?	9	Q. Okay. Does in not say that?
10	MR. LOCKE: Objection.	10	A. It says, "An odds ratio of 1.49
11	QUESTIONS BY MR. TISI:	11	was associated with more" and I'm sorry, I
12	Q. I highlighted it for you to	12	had to skip a couple pages "than 20 talc
13	make it easy.	13	years, greater than 7,200 applications"
14	A. That's what is said in the	14	
15	in the paper; however, when you look at	15	-
16	* * ·		A "in a dose response."
17	Table 2, duration of use, again, it's	16	Q. And if you go to page
	dichotomized into less than 20 years or	17	A. However, I would like to just
18	greater than 20 years. So there's no full	18	look at
19	never use and genital use.	19	Q. Your lawyer can ask you
20	And then it's looked at	20	questions. I asked whether that's in the
21	lifetime body powder applications. Again,	21	published article.
22	dichotomized in above median, 3,600, or	22	The next is on page 345, in
23	below or above 3,600.	23	summary.
24	That's not a dose response. A	24	Do you see that?
25	dose response is multiple categories. This	25	It says, "Overall, there's an
	Page 451		Page 453
1	is a dichotomy. This is a yes or no. Is it	1	association between genital talc use and EOC
2	more or less. That's not a dose response.	2	in a significant trend with increasing talc
3	Q. Okay. Doctor, that's what the	3	years' use."
4	authors say that's in the published	4	MR. LOCKE: Is there a
5	peer-reviewed literature, correct?	5	question?
6	MR. LOCKE: Objection.	6	MR. TISI: Yes. I said, is
7	MS. MILLER: Objection.	7	that correct?
8	THE WITNESS: I said that	8	MS. MILLER: Is what correct?
9	TILL WITHESS, I said that		VIS VIII LEN 18 WHAT COTTECT
٠,		1	
	that's what it said, but that's not	9	MR. LOCKE: Objection.
10	that's what it said, but that's not what dose	9 10	MR. LOCKE: Objection. QUESTIONS BY MR. TISI:
10 11	that's what it said, but that's not what dose QUESTIONS BY MR. TISI:	9 10 11	MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. I said do you see it. On
10 11 12	that's what it said, but that's not what dose QUESTIONS BY MR. TISI: Q. Okay. So why are you going any	9 10 11 12	MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. I said do you see it. On page 345, number 1 in the Cramer study, the
10 11 12 13	that's what it said, but that's not what dose QUESTIONS BY MR. TISI: Q. Okay. So why are you going any further than what I asked you?	9 10 11 12 13	MR. LOCKE: Objection. QUESTIONS BY MR. TISI: Q. I said do you see it. On page 345, number 1 in the Cramer study, the authors report in the peer-review literature:
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	Page 454		Page 456
1	QUESTIONS BY MR. TISI:	1	"However, only about half the studies
2	Q. Okay.	2	examined exposure response relationships, and
3	A. I can't comment on whether it	3	the evidence for this is less consistent.
4	was peer-reviewed or not.	4	Our study adds to the small group of studies
5	Q. Okay. And the next study,	5	that have investigated a combination of
6	which is the Terry study you've seen that	6	frequency and duration of use of ovarian
7	study before as well, Doctor? That's	7	cancer on ovarian cancer."
8	number 5?	8	A. So I think I think in my
9	A. I have.	9	report I actually said that Wu, there's a
10	Q. Okay. All right. Do you see	10	suggestion of a dose response, as well as
11	where the statement where it says I	11	Cramer 2016, there is a suggestion of dose
12	highlighted it for you. "The association	12	response.
13	between genital powder exposure and ovarian	13	But all the cutoffs were not
14	cancer may not be linear, and a modest	14	statistically significant, so, you know
15	exposure may be sufficient to increase the	15	Q. But, of course but, of
16	cancer risk."	16	course, we just agreed that Bradford Hill
17	Do you see that?	17	doesn't require a statistically significant
18	A. I do see that.	18	result on dose response. Just says it's good
19	Q. Okay. Next one is Wu. That's	19	if you have evidence of it.
20	the one where I think you agree there was	20	MS. MILLER: Objection.
21	evidence of dose response, correct?	21	MR. LOCKE: Objection.
22	A. Well, the statement in the	22	THE WITNESS: I didn't agree to
23	Terry where it just says, "Alternatively, the	23	that. I think that I have to take
24	associate" that's not saying that there's	24	what this table tells me, and if there
25	a dose response. That's just stating	25	is evidence of a dose response based
25	a dose response. That's just staring	25	is evidence of a dose response based
	Page 455		Page 457
-		1	
1	something.	1	on what the numbers look like and is
2	Q. Okay.	2	there a consistent increase in risk
2		1	there a consistent increase in risk with increasing duration and
2 3 4	Q. Okay.	2 3 4	there a consistent increase in risk with increasing duration and frequency, and those numbers are
2 3 4 5	Q. Okay.A. It says nothing about dose response.Q. Next one is Wu, number 5. I'm	2 3 4 5	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that
2 3 4 5 6	 Q. Okay. A. It says nothing about dose response. Q. Next one is Wu, number 5. I'm sorry, number 6. 	2 3 4 5 6	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that would suggest a dose response.
2 3 4 5 6 7	 Q. Okay. A. It says nothing about dose response. Q. Next one is Wu, number 5. I'm sorry, number 6. A. Number 6. 	2 3 4 5 6 7	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that would suggest a dose response. However, if we look at the risk
2 3 4 5 6 7 8	 Q. Okay. A. It says nothing about dose response. Q. Next one is Wu, number 5. I'm sorry, number 6. A. Number 6. Q. Okay. In the abstract, does it 	2 3 4 5 6 7 8	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that would suggest a dose response. However, if we look at the risk estimates in Wu here, looking at
2 3 4 5 6 7 8	 Q. Okay. A. It says nothing about dose response. Q. Next one is Wu, number 5. I'm sorry, number 6. A. Number 6. Q. Okay. In the abstract, does it not say, "Risk of ovarian cancer increased 	2 3 4 5 6 7 8 9	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that would suggest a dose response. However, if we look at the risk estimates in Wu here, looking at Table 2, looking at total number of
2 3 4 5 6 7 8	 Q. Okay. A. It says nothing about dose response. Q. Next one is Wu, number 5. I'm sorry, number 6. A. Number 6. Q. Okay. In the abstract, does it not say, "Risk of ovarian cancer increased significantly with increasing frequency and 	2 3 4 5 6 7 8 9	there a consistent increase in risk with increasing duration and frequency, and those numbers are statistically significant, then that would suggest a dose response. However, if we look at the risk estimates in Wu here, looking at Table 2, looking at total number of times, yeah, there is a there is a
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115 (Pages 454 to 457)

	Page 458		Page 460
1	QUESTIONS BY MR. TISI:	1	curve. But that but that's just
2	Q. Doctor, can you go back to	2	describing the curve.
3	Exhibit 32, which was the Chapter 2 out of	3	QUESTIONS BY MR. TISI:
4	the Rothman textbook.	4	Q. The last sentence of this says,
5	A. I have it here.	5	"The issues imply that a existence of a
6	Q. If you can go to the section on	6	monotonic association is neither necessary
7	biologic gradient.	7	nor sufficient for causal relation."
8	MS. MILLER: Can you point us	8	Is that true or not true?
9	to a page?	9	A. And I would just have to look
10	MR. TISI: Yeah. It's 28.	10	up to see what monotonic is being defined as.
11	THE WITNESS: 28.	11	Q. So you don't have any
12	MS. MILLER: Like where it says	12	understanding what the word "monotonic"
13	out of 30?	13	means?
14	MR. TISI: You know, I don't	14	MS. MILLER: Objection.
15	have my copy right there. I'm just	15	THE WITNESS: Well, I have an
16	using the book.	16	understanding, but I need to know what
17	MS. MILLER: Sorry. There's	17	monotonic is being referred to as
18	like different page numbers.	18	here.
19	MR. TISI: Yeah, if you just	19	QUESTIONS BY MR. TISI:
20	give me it's the one that maybe	20	Q. Well, what do you how do you
21	I will look at yours. Thank you.	21	define monotonic?
22	MS. MILLER: Sure.	22	MS. MILLER: Objection.
23	QUESTIONS BY MR. TISI:	23	THE WITNESS: Usually monotonic
24	Q. It's page it's page 27 out	24	means that there is an increasing risk
25	of 30.	25	with increasing dose, or a decreasing
	Page 459		Page 461
1	A. I see it.	1	risk with decreasing dose.
2	Q. Okay. Do you agree that not	1 2	QUESTIONS BY MR. TISI:
	Q. Okay. Do you agree that not all bio all dose-response relationships		QUESTIONS BY MR. TISI: Q. Okay. Let's just use your
2 3 4	Q. Okay. Do you agree that not all bio all dose-response relationships are linear?	2 3 4	QUESTIONS BY MR. TISI: Q. Okay. Let's just use your definition.
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2 3 4 5 6	Q. Okay. Do you agree that not all bio all dose-response relationships are linear? MS. MILLER: Objection. THE WITNESS: There may be	2 3 4 5 6	QUESTIONS BY MR. TISI: Q. Okay. Let's just use your definition. Is the monotonic association either necessary or sufficient for causal
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2 3 4 5 6 7 8	Q. Okay. Do you agree that not all bio all dose-response relationships are linear? MS. MILLER: Objection. THE WITNESS: There may be dose-response relationships that could be linear, there may be dose-response	2 3 4 5 6 7 8	QUESTIONS BY MR. TISI: Q. Okay. Let's just use your definition. Is the monotonic association either necessary or sufficient for causal
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	Page 462		Page 464
1	focused now on biologic gradient or dose	1	Remember that?
2	response.	2	MR. LOCKE: Objection.
3	Would you agree with	3	THE WITNESS: We would have to
4	Dr. Rothman that a monotonic association,	4	refer back to what what I said.
5	meaning increasing dose with increasing	5	QUESTIONS BY MR. TISI:
6	duration with increasing risk, is neither	6	Q. Okay.
7	necessary nor sufficient for causal relation?	7	A. I don't recall specifically my
8	MS. MILLER: Objection.	8	language.
9	THE WITNESS: And again, I'm	9	Q. Is it necessary to have a
10	going to have to go back to what I	10	dose-response relationship in order to show
11	just said because I'm not sure what	11	causation? Is that a required element?
12	Dr. Rothman is referring to here.	12	A. I think what I said earlier is
13	Is it just specifically for	13	that of the nine Bradford Hill
14	biologic gradient	14	considerations, none of them are required.
15	QUESTIONS BY MR. TISI:	15	Q. Okay.
16	Q. Yeah.	16	A. They're helpful in making an
17	A or is it well	17	in making in putting together an
18	Q. Let's assume that's what he's	18	evaluation looking at causality.
19	saying, because I want to know if, on its	19	Q. Is Dr. Rothman's statement here
20	own, a on its own, is it necessary to have	20	wrong?
21	a increasing risk with increasing dose	21	MS. MILLER: Objection.
22	MS. MILLER: Objection.	22	QUESTIONS BY MR. TISI:
23	QUESTIONS BY MR. TISI:	23	Q. Is the existence of a monotonic
24	Q to show causation?	24	association he says, "The existence of a
25	MS. MILLER: Objection.	25	monotonic association is neither necessary
	Page 463		Page 465
1	THE WITNESS: Again, I will go	1	nor sufficient for causal relations."
2	1 1 4 4 D 10 1IIII		
	back to the Bradford Hill	2	Is that wrong?
3	considerations, and that of the nine	2 3	Is that wrong? MS. MILLER: Objection.
4	considerations, and that of the nine considerations, none of them or all of	3 4	MS. MILLER: Objection. THE WITNESS: I'm going to say
4 5	considerations, and that of the nine considerations, none of them or all of them could support causation.	3	MS. MILLER: Objection.
4 5 6	considerations, and that of the nine considerations, none of them or all of	3 4	MS. MILLER: Objection. THE WITNESS: I'm going to say it depends. If you have nine other or eight other factors that suggest
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	Page 466		Page 468
1	exhibit it was?	1	asked that question.
2	QUESTIONS BY MR. TISI:	2	QUESTIONS BY MR. TISI:
3	Q. 21, please.	3	Q. Could that have been
4	A. 21. Got it.	4	MR. TISI: Counsel, I'm not
5	Q. You were critical of that study	5	even done, okay?
6	because Penninkilampi included Gertig but not	6	MS. MILLER: It sounded like a
7	Gates.	7	question.
8	Do you recall that?	8	MR. TISI: I'm not done.
9	MS. MILLER: Objection.	9	MS. MILLER: Apologies.
10	THE WITNESS: I did make	10	QUESTIONS BY MR. TISI:
11	reference that Gertig was included in	11	Q. In the Gates in the Gates
12	this meta-analysis and Gates was not,	12	study, do you know that talc use metric was
13	which is a more recent publication	13	great or equal to one week versus less
14	with greater numbers.	14	versus less than one time a week?
15	QUESTIONS BY MR. TISI:	15	MS. MILLER: Objection.
16	Q. Which Gates did you mean?	16	THE WITNESS: I'd love to look
17	Which Gates study did you mean should have	17	at it.
18	been included that wasn't?	18	QUESTIONS BY MR. TISI:
19	A. I'll just need to look up the	19	Q. I'm happy to show it. I'm
20	specific one in my report. Gates 2010.	20	happy to show it to you. It's my copy, so
21	Q. Okay. What was the talc	21	you can't have it. But it's in Table 4, and
22	exposure metric in Gates 2010?	22	this is Gates 2010.
23	A. If I could see the article, I	23	A. So Table 4 says, talc use,
24	could	24	greater than once a week versus less than
25	Q. Is it in your report?	25	once a week.
	Page 467		Page 469
1	A. I could point to it.	1	Q. Right.
2	Q. Is it in your report?	2	So it's a different metric, is
3	A. No, but I know that it was	3	it not?
4	but I would have to see the article because I	4	A. It may or may not be a
5	don't specifically remember what the	5	different metric because there is a previous
6	actual I don't want to be mistaken right	6	publication where the authors felt that this
7	now.	7	was a more reliable measure of exposure of
8	Q. Well, Penninkilampi used an	8	ever versus never.
9	ever use of talc, correct, as its metric?	9	Q. The point is, Doctor, you were
10	A. I mean, Table 1 in	10	critical of Penninkilampi as to why they
11	Penninkilampi summarizes the different	11	1 ,
			didn't include Gates 2010. And I'm asking
12	outcomes in the methods of talc use.	12	you: Would that be good reason not to
	outcomes in the methods of talc use. Q. Right.		-
12	Q. Right.	12	you: Would that be good reason not to include Gates 2010, because it used a
12 13	Q. Right.	12 13	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure?
12 13 14	Q. Right.A. There's any perineal, there's	12 13 14	you: Would that be good reason not to include Gates 2010, because it used a
12 13 14 15	Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's	12 13 14 15	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls
12 13 14 15 16	Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins.	12 13 14 15 16	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation.
12 13 14 15 16	 Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at 	12 13 14 15 16 17	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not
12 13 14 15 16 17 18	 Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at Penninkilampi under Figure 2 on the study 	12 13 14 15 16 17 18	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not necessarily, because the authors felt
12 13 14 15 16 17 18 19	 Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at Penninkilampi under Figure 2 on the study name. Under Figure 2 it says "any perineal" 	12 13 14 15 16 17 18 19	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not necessarily, because the authors felt that this that this metric was
12 13 14 15 16 17 18 19 20	Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at Penninkilampi under Figure 2 on the study name. Under Figure 2 it says "any perineal talc use."	12 13 14 15 16 17 18 19 20	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not necessarily, because the authors felt that this that this metric was actually a more reliable metric of
12 13 14 15 16 17 18 19 20 21	Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at Penninkilampi under Figure 2 on the study name. Under Figure 2 it says "any perineal talc use." Do you see?	12 13 14 15 16 17 18 19 20 21	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not necessarily, because the authors felt that this that this metric was actually a more reliable metric of ever versus never.
12 13 14 15 16 17 18 19 20 21	Q. Right. A. There's any perineal, there's non-perineal, there's diaphragm, and there's sanitary napkins. Q. Well, if you look at Penninkilampi under Figure 2 on the study name. Under Figure 2 it says "any perineal talc use." Do you see? A. I do see that.	12 13 14 15 16 17 18 19 20 21 22	you: Would that be good reason not to include Gates 2010, because it used a different metric of exposure? MS. MILLER: Objection. Calls for speculation. THE WITNESS: No, not necessarily, because the authors felt that this that this metric was actually a more reliable metric of ever versus never. QUESTIONS BY MR. TISI:

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	Page 470		Page 472
1	said ever versus ever.	1	kinds of stuff. You find time for those.
2	QUESTIONS BY MR. TISI:	2	My question to you is: Would
3	Q. They used ever use.	3	you find time do this, to submit your point
4	Gates Gertig used ever	4	of view to peer review?
5	versus never, correct?	5	MS. MILLER: Objection.
6	A. Gertig? Again, I don't have	6	THE WITNESS: Again, I'm going
7	these memorized, so I'm going to have to look	7	to have to answer it the same the
8	at it to see what we're referring to.	8	same way, that if an opportunity arose
9	Q. But the big question is you	9	and it seemed like an interesting
10	don't you can't sit here today and tell me	10	investigation
11	why it is that Penninkilampi did not use	11	QUESTIONS BY MR. TISI:
12	Gates 2010, can you?	12	Q. Is it an interesting
13	It's not in your report, and	13	investigation to you, or is this just
14	you can't tell me today?	14	something you did for this case?
15	MS. MILLER: Objection. Asked	15	MS. MILLER: Objection.
16	and answered.	16	THE WITNESS: This has this
17	THE WITNESS: The description	17	has been a very interesting exercise
18	of the of the pulling of articles	18	in evaluating epidemiology.
19	for the meta-analysis is described.	19	QUESTIONS BY MR. TISI:
20	The replication of that would have to	20	Q. And so now having been through
21	be performed to answer that question.	21	the process, do you intend to subject your
22	QUESTIONS BY MR. TISI:	22	opinions, particularly the ones where you
23	Q. And you didn't do that, did	23	were very strong in your criticism of those
24	you?	24	who have published and have put themselves
25	A. For me to for me to perform	25	out there, subject your opinions to peer
	Page 471		Page 473
1	my own meta-analysis by myself would be out	1	review?
2	of the scope of even performing an analysis	2	MR. LOCKE: Objection.
3	per a meta-analysis correctly.		
4		3	THE WITNESS: Well
4	Q. Doctor	3 4	QUESTIONS BY MR. TISI:
5	· · · · · · · · · · · · · · · · · · ·		QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself
	Q. Doctor	4	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself
5	Q. DoctorA. I'm going to need a team to do	4 5	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself
5 6	Q. Doctor A. I'm going to need a team to do that.	4 5 6	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question
5 6 7	 Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and 	4 5 6 7 8 9	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI:
5 6 7 8	 Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, 	4 5 6 7 8 9	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this.
5 6 7 8 9	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent	4 5 6 7 8 9 10	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you
5 6 7 8 9	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions.	4 5 6 7 8 9	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this.
5 6 7 8 9 10	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process.	4 5 6 7 8 9 10	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question,
5 6 7 8 9 10 11 12	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your	4 5 6 7 8 9 10 11 12	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer?
5 6 7 8 9 10 11 12 13	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process.	4 5 6 7 8 9 10 11 12 13	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question,
5 6 7 8 9 10 11 12 13	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your	4 5 6 7 8 9 10 11 12 13	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer?
5 6 7 8 9 10 11 12 13 14	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your views on ovarian cancer and talc?	4 5 6 7 8 9 10 11 12 13 14 15 16	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer? QUESTIONS BY MR. TISI:
5 6 7 8 9 10 11 12 13 14 15	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your views on ovarian cancer and talc? A. I have no idea what I'm going	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer? QUESTIONS BY MR. TISI: Q. Okay. Dr. Siemiatycki published in this, correct? MS. MILLER: Objection.
5 6 7 8 9 10 11 12 13 14 15 16 17	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your views on ovarian cancer and talc? A. I have no idea what I'm going to do in the future. I I am a I have	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer? QUESTIONS BY MR. TISI: Q. Okay. Dr. Siemiatycki published in this, correct?
5 6 7 8 9 10 11 12 13 14 15 16 17	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your views on ovarian cancer and talc? A. I have no idea what I'm going to do in the future. I I am a I have an active research career in cystic fibrosis	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer? QUESTIONS BY MR. TISI: Q. Okay. Dr. Siemiatycki published in this, correct? MS. MILLER: Objection.
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5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Doctor A. I'm going to need a team to do that. Q. Okay. We started our day today talking about publication and, you know, opinions inside and outside litigation and all those questions. Let me ask you this: You spent seven hours with me today. You wrote your report. You've been through this process. Do you intend to publish your views on ovarian cancer and talc? A. I have no idea what I'm going to do in the future. I I am a I have an active research career in cystic fibrosis and lung transplantation. If the opportunity arose where there was something to publish and seemed interesting, fine, but I can't predict that. Q. Well, you're also pretty busy	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	QUESTIONS BY MR. TISI: Q. Dr. Siemiatycki has put himself out there and submitted himself MS. MILLER: He started answering the question QUESTIONS BY MR. TISI: Q. Well, let me ask you this. MS. MILLER: and you interrupted him. Can we just end the day with question, answer, question, answer? QUESTIONS BY MR. TISI: Q. Okay. Dr. Siemiatycki published in this, correct? MS. MILLER: Objection. THE WITNESS: I'm going to have to look through what's been published by Dr. Siemiatycki. QUESTIONS BY MR. TISI:
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	Page 474		Page 476
1	MR. LOCKE: Objection.	1	tell our patients to stop using talcum
2	THE WITNESS: Again, I told you	2	powder, what would you tell them?
3	I didn't know about that.	3	MS. MILLER: Objection.
4	QUESTIONS BY MR. TISI:	4	THE WITNESS: Again, I I'd
5	Q. Dr. Smith-Bindman said she's	5	say it depends. If you're talking
6	going to submit her meta-analysis to	6	about based on the medical evidence
7	publication.	7	out there, there's no evidence to
8	Do you remember seeing that?	8	suggest that and if we're
9	A. You'd have to show me where she	9	specifically talking about risk of
10	said that.	10	ovarian cancer
11	Q. Dr. Moorman was a coauthor on	11	QUESTIONS BY MR. TISI:
12	the Schildkraut study, correct?	12	Q. Yes.
13	A. I'd have to look back through	13	A there's no evidence to
14	the list of authors to confirm or not	14	suggest a causal relationship between talcum
15	confirm.	15	powder and ovarian cancer.
16	Q. Some of them wrote Health	16	Q. No evidence whatsoever?
17	Canada, as counsel pointed out, to express	17	A. Based on the body of medical
18	their point of views on this in the comment	18	literature, no, there is not evidence
19	period, correct?	19	Q. And so you would
20	A. I have no idea.	20	A but there is a
21	Q. Do you have any intention, now	21	Q. You would tell them
22	having been through this process, as you sit	22	MS. MILLER: He's in a middle
23	here today, to submit your criticisms and	23	of a sentence.
24	your opinions to the criticisms of your	24	THE WITNESS: So what I said is
25	fellow peers?	25	it would depend. If we're talking
	1		
	Page 475		Daga 477
	5		Page 477
1	MS. MILLER: Objection.	1	about the medical literature, that
1 2		1 2	
	MS. MILLER: Objection.		about the medical literature, that
2	MS. MILLER: Objection. THE WITNESS: Submit where?	2	about the medical literature, that would be my response, that that
2 3	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI:	2	about the medical literature, that would be my response, that that that causal relationship does not
2 3 4	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical	2 3 4	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence.
2 3 4 5	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities,	2 3 4 5	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if
2 3 4 5 6	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues,	2 3 4 5 6	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or
2 3 4 5 6 7	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues, anywhere.	2 3 4 5 6 7	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or not talcum powder should be used for a
2 3 4 5 6 7 8	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues, anywhere. MS. MILLER: Objection.	2 3 4 5 6 7 8	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or not talcum powder should be used for a specific patient, it's going to be
2 3 4 5 6 7 8	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues, anywhere. MS. MILLER: Objection. THE WITNESS: And I'll just	2 3 4 5 6 7 8	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or not talcum powder should be used for a specific patient, it's going to be dependent on that specific patient.
2 3 4 5 6 7 8 9	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues, anywhere. MS. MILLER: Objection. THE WITNESS: And I'll just have to say I have no idea.	2 3 4 5 6 7 8 9	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or not talcum powder should be used for a specific patient, it's going to be dependent on that specific patient. There might be a wound in there.
2 3 4 5 6 7 8 9 10	MS. MILLER: Objection. THE WITNESS: Submit where? QUESTIONS BY MR. TISI: Q. Anywhere. Congress, medical meetings, regulatory authorities, publications, peer review, your colleagues, anywhere. MS. MILLER: Objection. THE WITNESS: And I'll just have to say I have no idea. QUESTIONS BY MR. TISI:	2 3 4 5 6 7 8 9 10 11	about the medical literature, that would be my response, that that that causal relationship does not exist based on the evidence. But if a doctor is asking if a gynecologist is asking me whether or not talcum powder should be used for a specific patient, it's going to be dependent on that specific patient. There might be a wound in there. There might be some other reason
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120 (Pages 474 to 477)

	Page 478		Page 480
1	aware of a potential link that's been	1	MS. MILLER: Of course.
2	discussed out there. Should I tell my women	2	MR. TISI: Can you find
3	to stop or should I tell them to continue	3	would you pull them over
4	using it?" what would you tell them?	4	QUESTIONS BY MS. MILLER:
5	Continue using it?	5	Q. We're going to be looking at
6	MS. MILLER: Objection, vague,	6	page 11.
7	and objection, asked and answered.	7	MR. TISI: I'm sorry, he just
8	THE WITNESS: So I would ask	8	started putting them away.
9	why, and it would be dependent on the	9	MS. MILLER: It's
10	answer to why.	10	understandable. I think everybody
11	QUESTIONS BY MR. TISI:	11	wants to get home for the weekend.
12	Q. If they said because there's a	12	QUESTIONS BY MS. MILLER:
13	concern that they might put myself at	13	Q. I'm looking at the bottom of
14	increased risk of ovarian cancer?	14	page of page 11 in Exhibit 31.
15	MS. MILLER: Objection. This	15	Do you recall Exhibit 31 was
16	was asked and answered.	16	shown to you earlier today?
17	QUESTIONS BY MR. TISI:	17	A. I do.
18	Q. If they said if they said	18	Q. And this is a document from the
19	that was the reason why, what would you	19	National Cancer Institute; is that correct?
20	answer would you respond to them?	20	A. That's what it appears to be.
21	A. I would say, based on the body	21	Q. The title is "Ovarian,
22	of medical evidence, there is no causal	22	Fallopian Tube and Primary Peritoneal Cancer
23	association between talcum powder and ovarian	23	Prevention," correct?
24	cancer.	24	A. Correct.
25	Q. Okay. So you'd tell them, keep	25	Q. There's a section on page 11
	Q		(
	Page 479		Page 481
1	Page 479 dusting?	1	
1 2		1 2	Page 481 titled "Perineal Talc Exposure." Do you see that?
	dusting?		titled "Perineal Talc Exposure." Do you see that?
2	dusting? MS. MILLER: Objection.	2	titled "Perineal Talc Exposure." Do you see that? MR. TISI: It's on page 11? I
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17 QUESTIONS BY MR. TISI: 17 MS. MILLER: Objection. And				
18 Q. Earlier? 18 we're out of time.		•	1	
19 MS. MILLER: Objection. 19 MR. TISI: You're not going to				č č
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	_			MS. SHARKO: He can answer that
, 1	21	Institute, but I don't know who put	1	-
•	22			
	22 23	this all together.	1	
25 Q. So now in the perineal talc 25 they did here.	22 23 24	QUESTIONS BY MR. TISI:	24	THE WITNESS: I don't know what

122 (Pages 482 to 485)

Case 3:16-md-02738-MAS-RLS Document 9737-7 Filed 05/07/19 Page 403 of 463 PageID: 38640 Christian Merlo, M.D., MPH

	Page 486	Page 488
1		1 INSTRUCTIONS TO WITNESS
2	MR. TISI: Thank you very much. I appreciate it.	2
3	VIDEOGRAPHER: Okay. That's	3 Please read your deposition over
4	it.	4 carefully and make any necessary corrections.
5	MS. MILLER: Thank you.	5 You should state the reason in the
6	VIDEOGRAPHER: The time is	6 appropriate space on the errata sheet for any
7	6:01 p.m., April 18, 2019. Going off	7 corrections that are made.
8	the record, completing the videotaped	8 After doing so, please sign the
9	deposition.	9 errata sheet and date it. You are signing
10	(Deposition concluded at 6:01 p.m.)	same subject to the changes you have noted on
11		the errata sheet, which will be attached to
12		12 your deposition.
13		13 It is imperative that you return 14 the original errata sheet to the deposing
14 15		the original errata sheet to the deposing attorney within thirty (30) days of receipt
16		16 of the deposition transcript by you. If you
17		fail to do so, the deposition transcript may
18		be deemed to be accurate and may be used in
19		19 court.
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	Page 487	Page 489
1		Page 489 1 ACKNOWLEDGMENT OF DEPONENT
2	CERTIFICATE	1 ACKNOWLEDGMENT OF DEPONENT 2
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2	CERTIFICATE I, CARRIE A. CAMPBELL, Registered Diplomate Reporter, Certified Realtime Reporter and Certified Shorthand Reporter, do hereby certify that prior to the commencement of the examination, Christian Merlo, MD, MPH	1 ACKNOWLEDGMENT OF DEPONENT 2 3 4 I,, do hereby certify that I have read the foregoing 5 pages and that the same is a correct
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